TREATISE

ON

FRUIT TREES.

VOLUME TWO.

TREATISE
ON FRUIT TREES;

INCLUDING

THEIR PICTURES, DESCRIPTIONS, CULTIVATION, &c.

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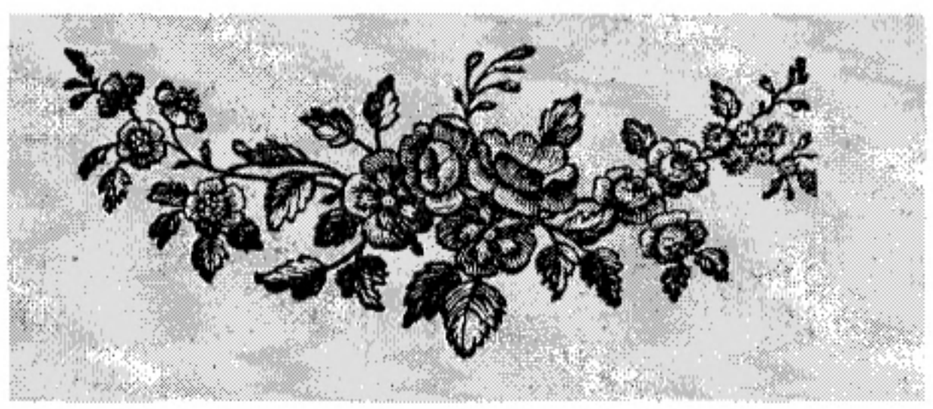
VOLUME TWO.



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BY THE CONSENT AND FAVOR OF THE KING.

TREATISE

ON

FRUIT TREES.

PERSICA,
PEACH TREE.

GENERAL DESCRIPTION.

[*Translator's note:* the term *ligne,* used frequently throughout this book, is a former measurement of length equivalent to 1/12 of an inch; the toise is an old French measure, approximately 1.949m, or 6.4 ft., roughly equivalent to a fathom.]

I won't attempt to clarify what the ancients had written about *Persæa, Persica, and Persicus,* to establish whether or not they knew the tree that we call the peach tree, nor to trace it with them from Ethiopia to Persia, from Persia into Egypt, from Egypt to Mycenae, &c. & to record its history as described in some very obscure texts or through traditions that are based only on these texts.

Though the peach tree didn't originate in our country, it has successfully chosen for its home a land where the only unfamiliar features were a permanently guaranteed refuge, a favorable welcome, & getting the best treatment. It's so completely acclimatized there

that the only foreign feature it has retained is the name *Persica.* The family has multiplied, diversified, dispersed, & established itself everywhere. It's not so much like a colony but rather like a populous nation that's long taken hold in this climate. Cultivated with more skill, care, and cost than are other fruit trees, it's now indisputably the one that's most worthy of our care & concern. No other tree can challenge it for the abundance, beauty, color, delicacy, sweetness, fragrance, freshness, & other qualities of its fruit; it's wholesome & there's almost no harm from its misuse.

If the natural size of a tree is judged by the size that it reaches on espalier when it's in good soil & well cultivated, the peach tree could be regarded as one of the largest fruit trees, since there are almost no others that spread as far as it does on a wall. But peach trees that grow in vineyards around Paris only attain average size. In the Dauphiné, Angoumois, & in other provinces that are more temperate than Paris, they grow larger. So the peach tree's size varies with climate, soil, & cultivation, but it's never close to that of the pear or cherry tree, or even an almond tree.

This tree isn't at all bushy though it puts out a lot of shoots, often more than it can sustain. They're straight and they get stronger the more they're cut back, or if the peach tree is younger or more vigorous. The bark is smooth; in some kinds it has a red color on the side toward the sun; it's entirely green in others.

The leaves (*Pl. I. Fig.9.)* are smooth, long, entire, alternate, more or less finely & fairly deeply denticulate on the margins depending on the type. They terminate in a point at both ends, much less sharply at the stalk than at the other end. They're attached to the branch

by short & thick pedicels that extend through the entire length of the leaf forming a prominent vein underneath & a very slight groove on the inside of the leaf. Each side of this midrib is supplied with very small short veins & with medium ones that extend as far as the margins & branch out into a large number of smaller ones. They're situated alternately & most of them also correspond in alternating sequence with those on the other side of the midrib. The leaves on most peach trees are a meadow-green or tend somewhat to yellow. They're folded in half when they emerge from buds. Their aroma & flavor closely resemble those of bitter almonds. Each node on a shoot bears one, two, or three leaves - rarely more. When there are several, the one in the middle of the stem is large; the others emerging at the sides are much smaller.

A bud forms in the axil of each leaf. Consequently the number of buds usually is equal to the number of leaves that originate at each node, & as a result there are single buds (*a*), double buds (*b*), & triple buds (*c, Fig.6.*)

The peach tree's flower is hermaphroditic, consisting of: 1°. a cup-shaped calyx (*Fig. 7.*) with an opening at the bottom, usually dark red on the side toward the sun & green on the opposite side. It's divided into five sections, or blunt segments that extend to the midpoint of the calyx, reflex onto the cup, and are hollowed spoonlike. 2°. five petals (*Fig.* 4, 2, 1.) arranged like a rose and attached by a thin unguis at the corners of the indentations of the calyx. Some flowers have six petals; the double flowers have a large number of them. The petals are slightly hollowed spoonlike, more or less rounded, colored a fairly deep red, and are large, small, or medium sized. The difference in the shape, color, & size of the petals

is a principal feature that distinguishes the types and varieties of peach trees. 3°. twenty to thirty stamens attached to the inner walls of the calyx (*Fig.* 5.) where they're coated with a granular & usually colored material. Four to six of them are situated between each indentation (*Fig.*4). Even though their filaments are shorter than the petals, the stamens still appear to be quite elevated above the disc of the flower when it's fully open. The flowers open to a greater or lesser extent depending on the type. The stamens terminate in olive-shaped tips that contain a very fine seminal powder. 4°. in the axis of the flower there's a pistil consisting of a rounded ovary, smooth or hairy depending on the type (*Fig.* 7.), at the center of the bottom of the calyx (*Fig.* 8) & a style the same length as the stamens surmounted with a blunt stigma.

The ovary becomes a fleshy & succulent fruit (*Fig.* 15.) whose internal and external features distinguish the different kinds of peaches. They can be grouped into four classes. 1°. those with skin that's hairy or covered with down & whose soft flesh readily separates from the skin & from the pit. These are the standard peaches. 2°. those with hairy skin but with firm flesh that doesn't separate either from the skin or from the pit; they're called clingstone peaches. 3°. those with smooth purple skin without down & with soft flesh that separates from the pit. These are purple peaches. 4°. those with smooth purple skin without down & the pit adheres to the flesh. They're called nectarines. The varieties of each kind are distinguished by their size, shape, skin & flesh colors, the flavor, the time that they ripen, the depth of the groove or furrow dividing them lengthwise, &c.

The fruit is suspended on a very short stalk that inserts into the end of a cavity (*Fig.* 16.) more or less deep depending on the type, & attaches to the branch above a quite prominent support or enlargement.

At the center of the fruit there is a large, woody, & extremely hard pit (*Fig.* 10.) that's slightly flattened on the sides. Along one edge of it there's a prominent ridge (*Fig.* 12.), & along the other edge (*Fig.* 11.) there's quite a deep groove that allows one to open the pit easily with a knife blade. Depending on the kind of peach tree, the exterior of the pit is brown, light gray, or dark red, rather roughly creviced or fissured with fairly deep, irregular grooves. It terminates at one end in a fairly long, sharp point & at the other end in a recess (*Fig.* 10.) where the fibers of the stalk are inserted. Its inside (*Fig.* 13.) is hollow & very smooth. It contains a bitter, oval-shaped kernel (*Fig.* 14.) that terminates in a point at one end. It's slightly flattened, consists of two lobes, & has a brown covering.

Those are the general features of peach trees. They're so much like those of almond trees that Linnaeus included both trees in the same genus with the same name, *Amygdalus*. However some quite significant differences allow one to distinguish peach trees from almond trees, but they don't at all change the accepted nomenclature. The particular features that characterize the types & varieties of peach trees will be detailed in the descriptions below. We will limit ourselves to the types that are well characterized & to their best-known varieties.

TYPES AND VARIETIES.

I. *PEACH TREE with large flowers and early small white fruit.*

White EARLY PEACH. (*Pl. II.*)

This peach tree grows quite large in certain soils where it's especially well adapted, but it's only a medium-sized tree in ordinary soil. It puts out few branches, but it's quite fruitful.

The shoots are slender & are green like the leaves.

The buds are small, oblong, and pointed.

The leaves, average sized, are longish, accentuated with nodules, folded along the central vein, and recurved in different directions. They're a beautiful green and are finely denticulate & bidenticulate on the margins.

The flowers are quite large, almost white or a very pale pink.

The fruit is small, no bigger than a walnut. Some are round, but most are oblong. They terminate in a small pointed projection that's sometimes very long. A very conspicuous groove runs along one side of the fruit from the stalk up to the projection. On some it continues onto a part of the other side & on others along the entire other side. But it's much less deep there & is hardly noticeable.

The skin is thin, downy, & white, even on the side facing the sun. However a very faint touch of red is visible there when the days get very warm around the end of June or the beginning of July.

Its flesh is white, even next to the pit, and is delicate & succulent. In dry soil & in dry seasons it gets a little mealy and in that case it's only good for compotes.

The juice is very sugary. It has a musky scent that makes it very pleasant. It's believed that this scent attracts ants that are very fond of this fruit.

The pit is small, almost white, and usually adheres to the flesh in several places.

This peach is the earliest one of all, sometimes ripening as soon as the beginning of July. It's a good idea to situate it in different exposures so that the later-ripening ones fill the interval between these & the ones to follow.

II. *PEACH TREE with large flowers and small red summer fruit.*

Red EARLY PEACH. Troyes EARLY PEACH. (*Pl. III.)*

This rarely is a large tree. It produces few branches & lots of fruit.

The shoots are red & slender.

The leaves are yellowish green, undulating or wrinkled next to the central vein. They're quite wide, terminate in a sharp point, bend downward, & are not very deeply dentate.

The flowers are large and pink.

The fruit is bigger than the white early peach, about thirteen or fourteen *lignes* long & fifteen or sixteen *lignes* in diameter. It's round and divided lengthwise on one side by a groove that's not very deep. Only very rarely does it terminate in a protuberance. On both sides of where the protuberance would be there are two small indentations, one of which forms the end of the groove.

The skin is thin and downy. Its color is very bright vermilion on the side in the sun; it becomes lighter closer to the shaded side where it's a light yellow.

The white flesh is soft and delicate, slightly tinged with red underneath the skin on the side in the sun; but there are no red fibers next to the pit.

The juice is sugary and musky. Its flavor usually is less refined than that of the white early peach, but it's more enhanced in certain regions.

The pit is small, seven *lignes* long, six *lignes* wide, five *lignes* thick, and light gray. Normally it separates freely from the flesh, but sometimes it detaches so little that this peach could be mistaken for a small clingstone.

Ants & earwigs are very fond of this peach.

Even in the best exposures it only ripens at the end of July or at the beginning of August.

III. *Summer PEACH TREE with small flowers and moderately thick fruit; said to be from Troyes.*

DOUBLE de Troyes. Troyes PEACH. Small Mignone. (*Pl. IV.*)

This peach tree is very similar to the preceding one. This is a more vigorous tree. It yields the same amount of fruit & produces more branches.

The shoots are red on the side toward the sun & green on the shaded side.

The leaves are sleek or smooth, sometimes slightly wrinkled next to the midrib. They're about four inches long and fourteen *lignes* wide. They're wider near the petiole than at the other end, which terminates in a very sharp point and are slightly & delicately denticulate on the margins.

The very small flowers clearly distinguish it from the red early peach tree.

The fruit is twice as large as that of the red early peach tree. It's not very consistent in shape. Sometimes it's round, with a length equal to its diameter (seventeen *lignes*). Sometimes it's slightly elongated from the tip to the stalk, and sometimes, conversely, it's about seventeen or eighteen *lignes* long & about twenty or twenty-one *lignes* in diameter. It's divided lengthwise by a not very deep groove, which occasionally has a small lip along the edge. The stalk inserts into a deep & quite wide cavity. The tip terminates in a small protuberance or pointed projection.

The skin is delicate and covered with light down. It's a very beautiful deep red color on the sunlit side. On the shaded side it's yellowish white, slightly flecked with red.

The flesh is firm, delicate, and white even next to the pit

where infrequently some red veins are seen.

The juice of this small peach is plentiful, slightly sugary and wine-like, which ranks it among the finer peaches.

The pit is small, nine *lignes* long, seven *lignes* wide, & six *lignes* thick. It doesn't separate easily from the flesh.

The fruit remains on the tree for a long time. It ripens about the end of August, coinciding with the ripening of the last of the red early peaches.

IV. *Summer PEACH TREE with small flowers and smaller fruit with golden yellow flesh.*

Yellow EARLY PEACH.

In its habit, flowers, shoots, and leaves this tree resembles the one that follows.

The fruit isn't as big as the *Double de Troyes* & it ripens at the same time. Its diameter is a little less than its length. The stalk inserts into a deep & very wide cavity. A not very deep groove divides it lengthwise, sometimes with an elevation resembling a rib. At the top it terminates in a large pointed projection recurved like a hood.

The skin is a deep red-brown on the side in the sun & golden yellow on the shaded side. It's covered all over with thick tan down.

The flesh is golden yellow except next to the pit & sometimes underneath the skin where it's carmine-red.

The juice is sugary & sweet.

The pit is red and its size is proportional to the size of the fruit. It terminates in a blunt point.

V. *PEACH TREE with small flowers and moderately thick fruit with light yellow flesh.*

Yellow CLINGSTONE PEACH. Yellow PEACH. (*Pl. V.*)

This peach tree is fairly vigorous. It sets fruit extremely well.

The shoots are dark red on the side in the sun & tend more to yellow on the side against the wall.

The leaves are green bordering on feuille morte. They turn red in autumn.

The flowers are small and dark red. Once in a while this peach tree has large flowers.

The fruit is a bit larger than the small Mignonne. Occasionally its length and diameter are equal. At other times it's about twenty *lignes* long by about twenty-three *lignes* in diameter. Most often it's oblong, slightly flatter at one end, especially at the end where the stalk inserts into the bottom of a large cavity. It's divided lengthwise by a very noticeable groove bordered by two quite prominent lips.

It has a thin skin that separates with difficulty from the fruit when it's not completely ripe. The skin is deep red where the sun has struck it but yellow beneath the leaves & on the side against the espalier. It has a lot of fawn-colored down.

The flesh is bright yellow but a very deep red near the pit. It's a lighter red underneath the skin. It's delicate & very soft when the fruit is fully ripe, but it's mealy in dry ground, on trees that are declining, & when the fruit has been picked while still green and has ripened only in a fruit loft.

The juice is sugary & wine-like when the soil isn't too moist & the fruit has completely ripened on the tree.

The pit is small, brown or dark red, and terminates

in a very small point. It's eleven *lignes* long, ten *lignes* wide & nine *lignes* thick.

It ripens around the end of August, after the *Double de Troyes* & the yellow early peach.

VI. *PEACH TREE with small flowers and large fruit with light yellowish flesh.*

ROSSANNE.

The Rossanne, or Rosanne, peach tree evidently is a variety of the yellow clingstone. The leaves are a bit wider and often are ruffled close to the midrib. The fruit is a little bigger, usually rounder, and it doesn't ripen as early. It's divided in the same way with a very conspicuous groove on one side, & even with a quite noticeable one on a part of the other side beyond the projection. At the tip a small indentation or flattening is noticeable. In its middle there rises a projection with a base of about one *ligne* in diameter & the same in height. It terminates in a very sharp point.

VII. *PEACH TREE with round fruit, pale flesh, adherent pit, and dark red skin.*

CLINGSTONE PEACH. PERSAIS d'Angoumois.

I brought this clingstone peach from Angoumois. The flesh is slightly yellow and very soft and red next to the pit. The skin is very dark red on the side facing the sun; the red color is less intense on the shaded side. In Angoumois this is a delicious fruit that ripens about the end of September.

VIII. *PEACH TREE with large flowers, round, flattened fruit and white flesh & skin.*

White MADELEINE. (*Pl. VI.*)

Although this tree appears to be quite vigorous & to grow well,

it's nevertheless very vulnerable to spring frosts that often damage its flowers & prevent the tree from setting fruit or cause the fruit to drop off after it's set.

The shoots are pale green, sometimes slightly reddish on the side in the sun. The pith is almost black.

The leaves are large, shiny, and pale green. They're deeply denticulate on the margins. Some are as long as six inches & twenty-one *lignes* wide.

The flowers are large, pale red, and bloom early.

The fruit is an attractive size, considerably larger than the yellow clingstone peach. It's two inches long & two inches two *lignes* in diameter. It's round, slightly flattened near the stalk & rounded at the top. It's divided lengthwise by a groove on the fuller part of the fruit that's not very noticeable. But it's quite deep near the stalk which inserts into the bottom of a broad & wide-open cavity & also near the top which terminates in a small, barely visible protuberance.

The skin is thin and easily separates from the flesh. It's white verging on yellow almost everywhere. On the sunlit side it's slightly streaked with a little bright & delicate red & covered all over with very fine down.

The flesh is delicate, tender, soft and succulent. It's white mingled with some yellowish streaks; sometimes they're pink next to the pit.

The juice is plentiful, sweet, and musky. It has a delicate flavor, sometimes quite accented, sometimes less so, depending on the soil & exposure. They greatly influence the quality of this delicate peach & when they're unfavorable it gets mealy.

The pit is small, round, light gray, one inch long, nine *lignes* wide, and six *lignes* thick.

It begins to ripen about mid-August

together with the last of the clingstones & ends with the Mignonnes & the early Chevreuses.

The white Madeleine is musky, and ants are very fond of it.

There's a variety of this peach tree that differs only in that its fruit isn't as big. The fruit often is less musky, but it's much more abundant. It could be called the small white Madeleine.

IX. *PEACH TREE with large flowers, white fruit with firm flesh and adherent pit.*

White CLINGSTONE PEACH. CLINGSTONE MADELEINE.

This clingstone peach is so similar to the white Madeleine that I have absolutely no doubt that it's one of its varieties.

The shoots are greenish, slightly red where they face the sun. Their pith is white instead of like that of the shoots of the white Madeleine, which is reddish, tending to black.

The leaves are light green and deeply denticulate. Almost all of them are slightly puckered along the midrib although not disfigured. Some of them are six inches long & nineteen *lignes* wide.

The flowers are large and a very light flesh color, almost white.

The fruit is about the same size & shape as the white Madeleine. It's twenty-six *lignes* long & twenty-eight *lignes* wide. The groove isn't very noticeable on the full part of the fruit, but it's deep near the stalk which inserts into a cavity less open than that in the white Madeleine, & deep also near the top where occasionally there's a very small projection.

The skin is completely white except on the side toward the sun where it's very slightly mottled with bright red.

The flesh is firm like that of all clingstones. It's white, succulent, and adheres to the pit where it has some streaks of red.

Its juice is quite plentiful & very wine-like when the fruit is fully ripe. This enhances its reputation among those who don't dislike firm fruit.

Its pit isn't big.

This clingstone ripens at the beginning of September. It makes very fine preserves both with sugar and with vinegar.

X. *PEACH TREE with large flowers and very slightly flattened fruit with red skin and muricate red-veined flesh.*

Red MADELEINE. Courson MADELEINE (*Pl. VII.*)

The peach that Riviere & Dumoulin call red Madeleine is very different one from this one. La Quintinye [*Translator's note*: Jean de la Quintinye, 1626 - 1688, French agronomist and author] evidently didn't know about it. Merlet confused it with the Paysanne which is small, frequently double, & not very commendable.

This peach tree is extremely similar to that of the white Madeleine.

The shoots have a bit more color & are more vigorous.

The leaves are a darker green and are more deeply denticulate & bidenticulate. The large ones are five inches long & twenty *lignes* wide. The medium ones are four inches long & eighteen *lignes* wide.

The flowers are large & slightly redder.

The fruit is round, often a little flattened at the end near the stalk, in contrast to the white Madeleine. It's bigger when the tree is only partly full of fruit & smaller when the tree bears a lot of it.

The skin is a beautiful red on the side in the sun.

Its flesh is white except next to the pit where there are some red veins.

The juice is sugary with an enhanced flavor that ranks this peach among the best.

The pit is red & quite small.

The fruit ripens in mid-September along with the large Mignonne, and often earlier.

This peach tree puts out a lot of branches, so care must be taken to prune it. It yields very little fruit, although it's not likely to abort like the white Madeleine.

The late Madeleine, or late red Madeleine with small flowers, seems to be a variety of the Courson Madeleine. Its flowers are small. The fruit is of average size & deeply colored. The cavity into the bottom of which the stalk inserts often has some quite conspicuous creases around the edge. If this peach tree whose fruit has such excellent flavor & which only ripens along with the Persiques didn't have such deeply denticulate leaves as well as the habit & most of the features of the Madeleine, I'd be tempted to think of it as a late purple peach.

XI. *PEACH TREE with large flowers, late, full, and flattened fruit, very slightly red skin, and white flesh.*

Malta PEACH.

This peach tree also can be regarded as a variety of the white Madeleine.

It's very vigorous & productive. The shoots are slightly red on the side toward the sun & their pith is slightly brown.

The leaves are more deeply denticulate than those of the white Madeleine & less so than those of the red Madeleine.

The flowers are large and pale pink.

The fruit is quite round, slightly flattened from the top to the stalk, sometimes bigger than the white Madeleine but often smaller & shorter. Its groove runs almost equally along both sides of it. The groove is deep only at the tip, where there's no projection at all. The stalk is set into a narrow cavity.

Typically it measures twenty-two *lignes* in height by two inches in diameter.

The skin takes on a red color where it faces the sun & usually has streaks that are darker red. The other side remains light green. It comes off easily.

The juice is slightly musky & very pleasant.

The pit is very much enlarged at the pointed end. It's an inch long, eleven *lignes* wide, and nine *lignes* thick.

It ripens a little after the red Madeleine.

XII. *PEACH TREE with round summer fruit, dark red with very sweet juicy flesh.*

True early PURPLE PEACH with large flowers. (*Pl. VIII.*)

This is a vigorous & fruitful tree.

The shoots are strong, of average length, and are tinged with red on the sunlit side.

The leaves terminate in a very sharp point. Their denticulation is even, very fine & not very deep.

The large flowers are a very bright red and are fully open.

The fruit is big and is divided into two hemispheres by a broad & quite deep groove. At the top of the fruit the groove ends in an indentation, sometimes a large one, where the location of the pistil is barely visible. At its other end there's a wide & deep cavity where the stalk inserts. The fruit has an attractive shape when it's twenty-five *lignes* in diameter & twenty-three *lignes* high. Often it's more than twenty-seven *lignes* in diameter & twenty-four *lignes* high. Sometimes the pit opens up and causes the fruit to swell. In that case its diameter is too large in proportion to its height, & consequently it has a less appealing shape.

Its skin is covered with fine thick down. It's a beautiful deep red on the side facing the sun. The other side is flecked with very tiny bright red spots, which make the skin look somewhat red when they're fairly big & close together. The skin is thin & easily separates from the flesh.

The flesh is delicate & very soft. It's white except around the pit where it takes on a bit of very bright red. It's unusual to see any of that underneath the skin, even on the sun side.

The juice is plentiful, very refined & delicious.

The pit is red and deeply creviced. It doesn't adhere to the flesh at all.

This lovely peach, which can be regarded as one of the best, ripens at the beginning of August, usually before the white Madeleine.

XIII. *PEACH TREE with small flowers and late, round, dark red and very sweet fruit.*

Late PURPLE PEACH TREE. (*Pl. IX.*)

This peach tree is a vigorous one.

Its shoots are big.

The leaves are large, very lightly denticulate, wrinkled along the midrib, and folded & bent around in different directions.

The flowers are very small.

The fruit is big, round, two inches four *lignes* long & two inches seven *lignes* in diameter. Sometimes it's slightly flattened at the top. The stalk is set into a very wide recess. The groove isn't very distinct & the protuberance is barely perceptible.

The skin, covered with a fine down, is a bright red color, darker on the side facing the sun. The shaded side is straw-yellow.

Its flesh is succulent, and very red next to the pit.

The juice is sweet with an enhanced flavor.

The pit is small, brown, and accented with large nodules. It terminates in a very long & narrow point.

Merlet confused this type with the Mignonne. The flowers of the late purple peach tree, which are small, & the time that the fruit ripens, only at the beginning of October, are sufficient to distinguish them.

XIV. *PEACH TREE with large flowers and very beautiful round, rich red fruit.*

MIGNONNE. Large MIGNONNE. VELVET PEACH of Merlet. (*Pl. X.*)

This is a vigorous tree that yields a good deal of fruit & puts out quite a lot of branches.

Its shoots are slender & very red on the side in the sun.

The leaves are large, deep green, lightly & very finely denticulate.

The flowers are large and bright red.

The fruit is big (twenty-four *lignes* long, twenty-eight in diameter), quite round, sometimes flattened at the end. It's divided into two hemispheres by a deep groove, not very wide & very narrow at the bottom. One of the edges often is higher than the other. In larger fruit the groove is barely noticeable in the fullest part, but it gets deeper closer to the stalk. The latter is so short & so deeply set inside a very wide & deep cavity that the branch itself leaves a dent in the fruit. The groove also becomes more conspicuous toward the top of the fruit. There's a small indentation or flattening at that end of the fruit. In the middle of it a very small projection formed by the remains of the pistil is visible.

The skin is thin and is covered with a very light down making it satiny. It easily separates from the flesh.

On the side that's struck by the sun it's a deep red-brown, & on the shaded side it's a light green verging on yellow. When viewed with a lens it's apparent that this side is speckled with red almost all over. When the fruit has ripened in the shade the skin is much less red & tends more to green.

Its flesh is fine, tender, delicate, and succulent. It's white except underneath the skin on the side facing the sun & next to the pit where it's mottled with a bright pink. On careful examination green spots verging on yellow can be seen. The flesh gets lighter & becomes a purer white closer to the red streaks surrounding the pit.

The juice is sugary, refined, and wine-like. It's slightly tart in cold regions.

The pit is average sized (an inch long, ten *lignes* wide, seven *lignes* thick), not very elongated, and very red. Shreds of flesh usually remain attached to it.

This peach ripens a little later than the Madeleine.

XV. *PEACH TREE with large flowers and round dark red very sweet summer fruit.*

Early PURPLE PEACH. WINE-LIKE. (*Pl. IX.*)

This is quite a vigorous peach tree with big branches. It yields a lot of fruit & it's not fastidious about exposure since the fruit never becomes mealy.

Its shoots, especially the fruiting ones, are long, slender, & supple. The bark on the sun side is dark red.

The large flowers are bright red.

The leaves are dark green & larger than those of the large Mignonne.

The fruit is an attractive size, round, a little flattened at the end & divided into two parts by a deep groove.

The skin is delicate and easily separates from the flesh. It's a very deep red even in places where sunlight doesn't strike it at all, & it's covered with very fine tan down.

The flesh is delicate and succulent. It's white except underneath the skin & around the pit where it's very red.

The juice is plentiful and wine-like, sometimes a little tart, especially in cold regions.

The pit is of average size & very red.

When comparing this description with the preceding one, it's easy to see why I haven't included this purple peach with other peaches of that name. I'm not in any way depriving it of its well known name which indicates its color. But I've listed it alongside the large Mignonne because it's a variety of it that differs very little. It's easy to tell it apart by the color of its skin & flesh & the time that it ripens.

XVI. *PEACH TREE with small flowers and very beautiful dark red round fruit.*

BOURDIN. BOURDINE [*Translator's note:* named by Louis XIV for his gardener].
NARBONNE. (*Pl. XII.*)

This is a large & vigorous peach tree. It sets fruit easily. Sometimes it gets too heavy with it; in that case the fruit doesn't grow very big if care hasn't been taken to cut back part of it. It succeeds very well in the open where it produces smaller but earlier and more delicious fruit than that on espalier.

The leaves are very large, smooth, & a beautiful green.

The flowers are small and flesh-colored edged with carmine.

The fruit is almost round with a diameter a little greater than its length. Usually it's a bit smaller than the large Mignonne. It's divided by a very wide & quite deep groove that often has a lip along one edge that's higher than the other edge. The side opposite the groove is flattened or recessed;

& where the groove meets this flattened side there's a kind of cavity at the end of the fruit. The groove is wider & deeper than the one on the Mignonne. The stalk inserts into a wide & deep cavity.

The skin is a beautiful deep red. It's covered with a very fine down and comes off the flesh easily.

The flesh is soft & delicate. It's white except next to the pit where it's very red, & sometimes the red color extends well into the flesh.

The juice is wine-like & has a delicious flavor without a certain recurrence of tartness that sometimes detracts a little from the quality of the Mignonne.

The pit is small, quite round, light gray in color. Large fibers remain attached to the pit when the fruit is fully ripe.

This beautiful peach ripens around mid-September.

In one sense all of its characteristics resemble the Mignonne. On the other hand, its small flowers & its beautiful deep red color raise the question whether it should be considered an early purple peach or a variety of the Mignonne.

XVII. *PEACH TREE with small flowers and flattened, very slightly verrucose summer fruit.*

Early CHEVREUSE. (*Pl. XIII.*)

This peach tree usually is available in all nurseries because it's very vigorous & yields lots of fruit.

The leaves are large, lightly & very finely denticulate. They're folded along the central vein.

The flowers are small.

The fruit is an attractive size, slightly oblong. It's divided lengthwise by a very noticeable groove bordered by two lips,

one of which is raised higher than the other. There often are small warts scattered on it, especially near the stalk. It terminates in a pointed projection, which usually is quite small.

The skin has a pleasant bright red hue.

The flesh is fine, white, very soft, and red next to the pit. It's not quite as delicate as that of the Madeleines.

The juice is sweet, sugary, & has a most delicious flavor.

The pit is brown, medium-sized, and slightly elongated.

This peach ripens between mid-August & the beginning of September. If it's not situated in the best exposure, or if it's allowed to become overripe, it gets mealy & develops a bad taste.

I suspect that the peach I've just described isn't the true early Chevreuse but rather is a variety of it that Merlet & la Quintinye call the Italy peach.

The peach nowadays known as the Italy peach is also a variety of the early Chevreuse. It's a very vigorous tree. I don't know any other peach tree that puts out shoots that are as long & as strong. Its leaves are larger, and its flowers are small. Its fruit ripens later. It's bigger, oval-shaped, slightly pointed, and has less color & its color is lighter & less strong. The flesh is red next to the pit. It's very juicy.

I believe that the true early Chevreuse is the one I'm about to describe below.

XVIII. BELLE CHEVREUSE.

All the characteristics of the tree are the same as those of the Chevreuse, n°. 17.

The fruit is oblong, two inches, three *lignes* long & two inches in diameter. The lengthwise groove that divides it is scarcely perceptible along the full side,

but it becomes much more so toward either end, especially at the top where there's a visible cleft & a pointed protuberance, sometimes very small. The stalk attaches at the bottom of a cavity, which is quite narrow & almost always is bordered by a few bumps or small swellings. It's quite common to see some of them distributed over the rest of the fruit.

When this peach is fully ripe, its skin is yellow almost everywhere except in places exposed to the sun where it becomes a bright light red. It's covered with quite a thick down that's easily wiped off. The skin won't separate from the flesh easily unless the fruit is very ripe.

Generally the flesh is neither very soft nor very delicate. Sometimes it's even a little mealy when the fruit is very ripe. It's slightly yellowish except underneath the skin on the side toward the sun where it has a light reddish tint & next to the pit where it's mottled with pink.

The juice is sugary & quite pleasant.

The pit is large, brown, very deeply creviced and terminates in a sharp point. It's sixteen *lignes* long, nine *lignes* wide, and six-&-a-half *lignes* thick.

This peach ripens together with the Mignonne around the beginning of September.

XIX. *PEACH TREE with large flowers and pale red, smaller, very slightly verrucose summer fruit.*

True CHANCELLIERE with large flowers.

This peach tree is very similar to that of the *Chevreuse* with respect to its vigorous shoots & large leaves.

The flowers are large.

The fruit is an attractive size, a bit less elongated than the *Chevreuse* n^{o}. 17. It's two inches in diameter

& twenty-two *lignes* high. It's divided into two unequal hemispheres by a groove that's deep only near the stalk, which is set in a narrow & deep cavity, & also at the top where a very small protuberance is visible. The side of the fruit opposite the groove is flattened.

The skin is very thin & a beautiful red on the side toward the sun.

The juice is sugary & delicious.

The fruit ripens at the beginning of September, after the Belle Chevreuse.

These two peach trees can be told apart only by their flowers & by when their fruit ripens. In a number of gardens the Chancelliere is represented by a variety of the Chevreuse that has small flowers & somewhat rounder fruit that doesn't ripen as early.

XX. *PEACH TREE with small flowers and late, flattened very slightly verrucose fruit.*

Late CHEVREUSE. PURPLE PEACH. (*Pl. XIV.*)

This is a vigorous tree & it gets very full, so the fruit has to be thinned out so that the tree looks prettier.

The shoots are red on the side toward the sun.

The leaves are large, very lightly denticulate, and very slightly puckered next to the midrib.

The flowers are small and red-brown in color.

The fruit is a nice size and is somewhat oblong. It's divided by quite a deep groove bordered by two lips, one of which is higher than the other. It terminates in a protuberance.

The skin is slightly greenish on the side toward the wall & a very beautiful red where it faces the sun, which gives it the name purple peach.

The flesh is white except near the pit.

The juice is delicious & very enjoyable.

The pit is average-sized.

A lot of shreds of the flesh remain attached to it when the fruit is opened up.

This peach ripens at the end of September.

There are some very late Chevreuses that are hardly worth cultivating because they rarely ripen.

Nota. Even though the Chevreuse peach trees are vigorous trees, they're extremely sensitive to differences in soil & exposure. Sometimes that can change them so much that they're hardly recognizable & are mistaken for other varieties. The nurserymen at Vitry have some very beautiful & very big Chevreuses & especially some late ones that are about three inches in diameter. The same trees transplanted into ordinary soil yield much smaller fruit & sometimes with a slightly different shape.

XXI. *PEACH TREE with small flowers and smooth, summer fruit with white flesh and skin that's partly white, partly pale red.*

CHERRY PEACH. (*Pl. XV.*)

This tree has the same habit as the small Mignonne peach tree. It's no larger & it produces a good deal of fruit.

The shoots are slender and a beautiful red on the side toward the sun.

The leaves are similar to those of the small Mignonne. They're long, narrow, and smooth. Some are wrinkled along the large vein.

The flowers are small & pale red.

The fruit is small, at most eighteen *lignes* long & twenty *lignes* in diameter. It's well rounded and divided by a wide & deep groove that frequently is detectable on part of the opposite side beyond the protuberance; it terminates in a protuberance that normally is quite big, long, & pointed.

The stalk inserts into a very wide & deep cavity.

The skin is thin, smooth, and shiny and has a beautiful cherry color on the side toward the sun & is a waxy white beneath the leaves & on the side toward the espalier. These colors, comparable to those of the Api apple, make this small fruit very pleasant to look at. The flesh is white, slightly lemon-colored, even next to the pit, however it sometimes has a few traces of red there. It's quite delicate & soft.

The juice is somewhat bland. Nevertheless it has quite good flavor in dry soil & in good exposures.

The pit is small, round, white or light yellow-brown & does not cling at all to the flesh.

This peach ripens toward the beginning of September. It looks decorative on a plate of fruit; that's its chief virtue.

XXII. *PEACH TREE with small flowers and smooth, small, purple wine-like fruit.*

Early SMALL VIOLETTE. (*Pl. XVI. Fig. 2.*)

This is a beautiful peach tree. It's quite vigorous, it puts out ample branches & a lot of fruit, even as a bush tree.

The shoots are medium-sized and red on the side in the sun.

The leaves are smooth, oblong, & a beautiful green.

The flowers are very small and red-brown in color.

The fruit is the same size as that of the Double de Troyes, sometimes smaller. It's almost round, but frequently greater in length than in diameter & slightly flattened on the sides. It's divided lengthwise by a not very deep groove, & it usually terminates in a quite small protuberance. The cavity where the stalk inserts isn't as wide & is not as deep as that of the cherry peach.

Its skin is smooth & lacks down. It's thin, red-violet on the side facing the sun & yellowish-white under the leaves. The colors aren't as striking as those of the cherry peach. The flesh is delicate, quite soft, slightly yellowish white and bright pink next to the pit.

The juice is sugary, wine-like, & very fragrant. That's what puts it in a class with the best of the peaches.

The pit is light gray and is big relative to the size of the fruit.

This peach ripens at the beginning of September. For good eating it should be left on the tree until it starts to wither next to the stalk.

The Angervilliers Violette, highly rated for good reason, is the same as this one, or a small Violette that differs from it only because it ripens a little earlier.

XXIII. *PEACH TREE with small flowers and smooth, larger purple wine-like fruit.*

LARGE early VIOLETTE. (*Pl. XVI. Fig. 1.*)

This tree is similar to the preceding one. It's vigorous & very fruitful. It yields a lot of fruit even out in open ground.

The flowers are very small.

The fruit has the same shape as the small Violette, but it's at least twice as big. Sometimes its diameter is greater than its length (twenty-six *lignes* by twenty-four).

Its skin is smooth, thin, & the same color as that of the small Violette.

Its flesh is white and soft but less wine-like.

The fruit also ripens at the beginning of September, a little later than the small Violette. Normally, the bigger it is, the better its quality. But a large early Violette of a size shown in the illustration, is rarely a good one.

XXIV. *PEACH TREE with small flowers and late smooth wine-like fruit, & variegated red to purple.*

Late VIOLETTE. Mottled VIOLETTE. Variegated VIOLETTE (*Pl. XVII.*)

This is a vigorous tree; it puts out lots of branches & yields a lot of fruit.

The shoots are very deep red on the side in the sun & green on the side against the wall.

The leaves are large, beautifully green, finely denticulate on the margins, and wrinkled near the midrib.

The flowers are very small and pale red in color.

The fruit is medium-sized, very similar to the large early Violette, but less round, more elongated, often sort of crooked. At its top there's a small indentation. In the middle of that there isn't much of a protuberance, but rather a white spot from which emerges the dried up style of the pistil like a very long, black hair.

The skin is smooth, purple, and marked with specks or small red spots on the side toward the sun, which is why it's called mottled. It's greenish on the side in the shade.

The flesh is white, tending a bit toward yellow. It's red next to the pit.

The juice is very wine-like if the autumn is warm & dry. But if it's cold, this peach won't ripen at all. It will split open & only be good for compotes. To hasten & facilitate ripening this tree has to be planted in the warmest possible exposure & the fruit kept uncovered.

The pit is average-sized.

The peach ripens a little before mid-October.

XXV. *PEACH TREE with small flowers and smooth, nearly green and exceptionally late fruit.*

Very late VIOLETTE. WALNUT -PEACH.

This peach tree altogether resembles the preceding one.

The skin of the fruit is not spotted with red. On the side facing the sun it's red like an Api apple, & on the shaded side it's green like the husk of a walnut.

The flesh is slightly greenish.

This peach ripens after the middle of October in a southern exposure & in a warm & dry autumn. It often doesn't ripen at all, & consequently the tree isn't really worth cultivating.

XXVI. *PEACH TREE with large flowers and smooth, purple wine-like fruit and flesh that adheres to the pit.*

Purple musky NECTARINE. (*Pl. XVIII.*)

This is a vigorous peach tree that puts out a lot of branches & yields abundant fruit.

Its shoots are big, long, and red on the sun side.

The leaves are very finely denticulate.

The flowers are big & beautiful, pale red in color. Occasionally this tree has small flowers.

The fruit looks a lot like the large early Violette. It's not quite as big & it's almost round.

Its skin is smooth, slightly yellowish white on the shaded side. It's an extremely beautiful red-violet on the side facing the sun. The edges of the colored part closer to the yellow side are lighter & are speckled with large whitish dots or small spots.

Its flesh, though firm, isn't at all dry. It's white, almost yellow, except next to the pit where it's very red.

The juice has a delicious flavor, wine-like, musky & sweet.

The pit is average-sized, very red & very adherent to the flesh.

This nectarine ripens at the end of September. For the flesh to become more tender, the tree must be planted in the best exposure, the fruit picked only when it begins to fade & to let it become even juicier by storing it for a while in a fruit loft.

XXVII. *PEACH TREE with small flowers and late, smooth, spherical fruit, pale in color with a slight flavor of apricot.*

Smooth YELLOW PEACH. Yellow LISSÉE. (*Pl. XIX.*)

This is a vigorous tree & it resembles the small early Violette peach tree.

Its shoots are long & yellowish.

The leaves are big & wide. They turn yellow in the fall.

The flowers are small or medium-sized.

The fruit is round, not as big as the large Violette, sometimes slightly flattened.

Its skin is yellow, smooth, & has no down. It's slightly streaked with red on the side facing the sun.

Its flesh is firm & yellow.

In a mild autumn the juice is sweet, most enjoyable, & it acquires a slight flavor of apricot.

The pit is average-sized.

The smooth yellow peach ripens in mid-October. It can be stored for about a fortnight in a fruit loft where it will ripen completely. As a result it can be eaten until the beginning of November.

XXVIII. *PEACH TREE with small flowers and large, round, dark red fruit with firm, sweet flesh.*

BELLEGARDE. GALANDE. (*Pl. XX.*)

This is a beautiful peach tree, especially when it's in good soil.
Its shoots are big and are red on the side in the sun.
The leaves are large, smooth, and deep green.
The flowers are very small and pale.
The fruit is big, round, and is very similar to the Admirable. The lengthwise groove dividing it isn't very pronounced.
Its skin is a red-purple color almost everywhere. It verges on black on the side toward the sun. It's firm, very adherent to the flesh and is covered with a very fine down.
The flesh is pink next to the pit. It's firm & sort of crisp; however it's delicate & full of juice.
The juice is sugary & has a very good flavor.
The pit is medium-sized, flattened, longish, & terminates in quite a long point.
This peach ripens at the end of August after the Mignonnes & the red Madeleine.
Merlet's Bellegarde is a Persique, very different from our Bellegarde.

XXIX. *PEACH TREE with small flowers and large, round, pale red fruit with firm, sweet flesh.*

ADMIRABLE. (*Pl. XXI.*) [*Translator's note*: a peach variety first mentioned by Lectier in 1628 but probably originated in France much earlier].

This is a large, strong, vigorous peach tree that produces a lot of branches & fruit.
Its shoots are big & strong.
The leaves are large, beautiful, long and smooth.

The flowers are small, pale red in color.

The fruit is very big, twenty-seven *lignes* long & thirty *lignes* in diameter. It's round and divided along one side by a not very deep groove. The other side is very rounded and has no indentation or groove. The top is very rounded as well & terminates in a small protuberance which often is no bigger than a pinhead. The stalk inserts into a quite deep & not very wide cavity.

Its flesh is firm, delicate, and tender. It's white except close to the pit where it's pale red.

The juice is sweet, sugary, & has a fine accented and excellent wine-like flavor.

The pit is small.

The skin is a bright red color on the side that faces the sun. Everywhere else it's light yellow, the color of straw, which makes a very attractive color pattern.

This peach ripens in mid-September. It deserves its name because of its beauty & its outstanding qualities, & it ranks ahead of the best peaches. It's not likely to get mealy & although it's most ideal when it's in the best exposures, it succeeds quite well in average ones. When the tree declines, the pit enlarges, occasionally splits, & the peach, dropping before it's ripe, is acrid & bitter.

This tree requires more care in pruning than do the others because it's very susceptible to peach leaf curl, a disease brought on by cold wind. The branches often deteriorate & the very large ones are abruptly lost.

XXX. *PEACH TREE, full-flowered with large late round fruit and pale flesh.*

Yellow ADMIRABLE. APRICOT-FLAVORED. Apricot PEACH.
Large late yellow PEACH. (*Pl. XXII.*)

This peach tree resembles the Admirable in its habit - it's a large & beautiful tree that yields ample fruit, even when out in the open.

And also in its shoots which are vigorous, but more of a yellow green.

And in its leaves which are beautiful. But they turn yellow in autumn & even redden at the tip. Almost all of them are folded along the central vein & are recurved downward.

The flowers are big & beautiful. Occasionally this peach tree has small flowers like the Admirable.

The fruit is big, round, flattened & its diameter is much smaller near the top. It's divided by a not very deep groove along one side.

Its skin is yellow & smooth and is covered with fine down. It takes on a bit of red color on the side toward the sun.

The flesh is yellow, the color of apricot, except next to pit & underneath the skin on the sunlit side where it's red. It's firm, sometimes a little dry & even mealy in a cold autumn.

The juice is pleasant and has a little scent of apricot in a warm autumn.

The pit is small, red, & clings slightly to the flesh.

This peach ripens around mid-October. The last fruits that remain on the tree are the best.

The yellow Admirable can be raised successfully from its seed & out in the open where the fruit is very much better & has more color but is considerably smaller.

There's another yellow Admirable, or a variety of this one,

that bears large flowers & yields bigger fruit.

XXXI. *PEACH TREE with large flattened fruit and firm pale flesh that adheres to the pit.*

Yellow CLINGSTONE.

This tree that I brought back from Provence looks a lot like the yellow Admirable. But its fruit is flattened on the sides like an apricot. The flesh is a little dry & clings to the pit. It ripens at the same time as the yellow Admirable. It's an extremely good fruit; sometimes it gets bigger than the Pomponne clingstone & ripens just as easily in our climate.

XXXII. *PEACH TREE with small flowers and slightly round, nippled pale red fruit with most pleasing flesh.*

BREAST OF VENUS. (*Pl. XXIII.*)

This peach tree is very similar to the Admirable in vigor, in the strength of its shoots, and in the beauty of its leaves which are very finely denticulate; some of them are puckered near the midrib, and in its flowers that are small, pink, and edged in carmine.

The fruit isn't as round. Its diameter & length are almost equal (thirty-one *lignes* by thirty *lignes*). Occasionally it's much bigger than the Admirable. One side is divided lengthwise by a not very deep groove, often barely detectable, that terminates in a small indentation at the top of the fruit. The other side is slightly flattened & this flattening also terminates in a small indentation at the top of the fruit. Between these two indentations there's usually a protuberance so big that according to some it typifies the fruit. Sometimes, especially on bigger fruit, there's no groove or flattening that's readily apparent on the sides. Nor is there an indentation

or a protuberance at the top. But others claim that when viewed from this end it's shaped very much like the object for which the fruit was named. The stalk is set in a deep & quite wide cavity.

Its skin is covered with delicate down. It doesn't acquire much color on the side in the sun. All of the shaded side is straw-colored.

The flesh is delicate and soft. It's white except next to the pit where it's pink.

The juice has a very fine & very pleasant fragrance.

The fruit ripens at the end of September.

The pit is medium-sized and terminates in a point. Large shreds of the flesh stay stuck to it.

XXXIII. *PEACH TREE with small flowers and late, very slightly oblong dark red fruit.*

ROYALE. (*Pl. XXIV.*)

This peach tree seems to be yet another variety of the Admirable. It's similar in vigor & fruitfulness, in the energy of its shoots, in the beauty of its foliage, and in its flowers which are small, flesh-colored, and edged in carmine.

The fruit shares some of its characteristics with the Admirable & others with the Breast of Venus. It's big, almost round, and is divided into two hemispheres by a not very noticeable groove. One side usually is convex & the other side is flattened, which makes the fruit somewhat oblong. At its top two small indentations are evident at the sides of a quite large protuberance, but it's a smaller & more pointed one than that on the Breast of Venus. The stalk is attached at the bottom of a deep, narrow, & almost oval cavity. The fruit often has bumps on it like warts.

The skin, completely covered with whitish down, has more color than the Admirable. On the side toward the sun it's colored light red with a lot of darker red in it. On the shaded side it's almost green & tends to become yellow when the fruit is fully ripe.

The flesh is delicate and white except next to the pit where it's redder than the Admirable. Sometimes there's a light tinge of red underneath the skin on the sunlit side.

The juice is sugary, refined & pleasant.

The pit is quite big and deeply fissured. It's liable to rupture inside the fruit, which will then spoil in the center & lose all of its good qualities.

This fruit ripens at the end of September.

XXXIV. *PEACH TREE with small flowers and large round light red muricate fruit with purple veins and firm & very sweet flesh.*

BELLE de Vitry. Late ADMIRABLE. (*Pl. XXV.*)

Several kinds of peach trees are claimed to be the Belle de Vitry: the Madeleines because sometimes their leaves are almost just as denticulate as theirs; the Mignonnes because this tree has a port which is almost that of the small Mignonne; the Nivette because its fruit is somewhat similar; and finally the Admirable because it shares most of its characteristics.

This tree is vigorous & fruitful.

Its shoots are strong.

The leaves are large and sometimes quite deeply denticulate.

The flowers are small and red-brown.

The fruit is big, rounder than the Nivette, about twenty-seven *lignes* long & twenty-eight or twenty-nine *lignes* in diameter. The large diameter generally is at the top end. The groove that divides one side of the fruit is wide

& not very deep. The other side is slightly flattened. The tip often terminates in a pointed projection. The stalk inserts into the bottom of a not very wide cavity. Small bumps like warts sometimes are found on this fruit.

The skin is quite firm & adheres to the flesh, like that of the Nivette, but it's slightly more greenish in color. The side exposed to the sun is an overall light red permeated or mottled with darker red. The entire skin is covered with white down that is longer than that on the Nivette & which comes off easily when it's rubbed by hand.

The flesh is firm, tender, and succulent. It's white, bordering a little on green. It turns yellow on ripening. There are some very red lines or veins next to the pit.

The juice has an enhanced flavor & is very enjoyable.

The pit is long, wide, flat, deeply fissured & terminates in a point. There's considerable space between it & the flesh.

This peach ripens toward the end of September. To be at its best it must be fully ripe & left in a fruit loft for several days.

XXXV. *PEACH TREE with large flowers and very large, beautiful fruit with firm flesh that clings to the pit.*

Red CLINGSTONE PEACH from Pomponne. Giant CLINGSTONE PEACH.

Camu CLINGSTONE PEACH. (*Pl. XXVI.*)

This is a very vigorous tree.

Its shoots are long & strong.

The leaves are large, very lightly & delicately denticulate.

The flowers are large. They don't fully open up because the petals are very concave.

The fruit is round. Its size is extraordinary, often fourteen inches in circumference. It's divided by a not very deep groove.

Its skin is thin, smooth, and covered with very fine down. On the sunlit side it acquires a very beautiful red color. On the other side it's white, tending a little to green.

The flesh adheres to the pit. It's white except next to the pit & underneath the skin on the sunlit side where it's red. It's firm but nonetheless succulent. In a warm & dry autumn the juice is wine-like, musky, sugary & very enjoyable. It's tasteless when the autumn is cold & rainy.

The pit is small & red.

This clingstone ripens at the beginning of October. It stays on the tree for a long time where it looks very pretty as it's about to ripen; but it has unsightly bumps on it when it's still green.

There's also a red clingstone peach that differs so little from the one above that it hardly can be considered a variety. Nevertheless it ripens a little sooner & it isn't as big. It's flattened at the top where the end of the groove forms an indentation. No protuberance is visible there at all. It's well rounded at the end near the stalk, which inserts into an oval recess that's very deep but not very wide. The skin is delicate, very deep red on the side toward the sun and a lighter red on the shaded side, where there's only a small light yellow area. The flesh is white on the side in the shade and very deep red next to the pit. It's also red underneath the skin on the side toward the sun, & this red color penetrates deeper & mottles the flesh on that side.

XXXVI. *PEACH TREE with medium-sized flowers, and large, round fruit with a gentle red color and a most pleasing flavor.*

TEINDOU. TEIN DOUX [*Translator's note:* literally, gentle color] (*Pl. XXVII.*)

This is a vigorous tree.

Its shoots are big & almost green.

The leaves are large, smooth, deep green, not denticulate or only very slightly so.
The flowers are medium-sized.
The fruit is big, quite round, larger in diameter than in length (twenty-six *lignes,* by twenty-four *lignes* long). It's divided into two slightly unequal hemispheres by a groove that extends almost equally along both sides. The groove is barely perceptible on the more enlarged part. But it's quite deep near the stalk, which is so short that the branch itself makes a dent in the fruit. The groove also is deep near the top where it terminates in two small indentations. Between them, instead of a protuberance, there is normally an elevation about one *ligne* wide that makes contact with & extends into both of the hemispheres.
The skin is thin and is covered with a very light & delicate down. It acquires a soft red color on the side in the sun.
The flesh is white & delicate. There are some light red streaks next to the pit.
The juice is sweet & has a very delicate flavor.
The pit is quite big, deeply creviced, and terminates in a sharp point. It often splits open & makes the fruit puff out as the gardeners say. In other words it swells around its diameter, which then becomes much larger than its length. At that point the fruit loses much of its quality.
It ripens toward the end of September.

XXXVII. *PEACH TREE with small flowers and late, large, round, pale red fruit.*

VELVET NIVETTE. (*Pl. XXVIII.*)

This very vigorous tree yields a lot of fruit.
Its shoots are big and are not very red even on the side in the sun.
The leaves are large, plain or smooth.

The flowers are small and dark red.

The fruit is big, rounded, and somewhat longish, about thirty *lignes* long by twenty-seven or twenty-eight *lignes* in diameter. The groove dividing it lengthwise is wide & not very deep. The top occasionally terminates in a small pointed projection set in the middle of a small and not very deep indentation. The stalk inserts into the bottom of a cavity that's deep but usually not very wide.

Its skin is quite firm and adheres to the flesh unless the fruit is very ripe. It has a greenish eye but it turns yellow when the fruit is completely ripe, except on the shaded side where a tinge of green remains. The side toward the sun overall is a light & pale red permeated with darker red spots. It's completely covered with fine white down that makes it look satiny. The down comes off easily when rubbed with the palm of the hand. The skin adheres to the stalk so tightly that often when the fruit is picked some of the skin remains attached to it.

Its flesh is firm but succulent. It's white verging on green, except next to the pit where there are some very bright red veins.

The pit is very brown and deeply creviced.

This peach ripens at the end of September. To be at its best it must be very ripe & have been in a fruit loft for several days.

XXXVIII. *PEACH TREE with small flowers and late oblong, verrucose, colored fruit with firm wine-like flesh.*

PERSIQUE. (*Pl. XXIX.*)

This tree is handsome, vigorous, and yields lots of fruit, even when growing out in the open.

Its shoots are strong and red on the side in the sun.

The leaves are wide, very long, slightly puckered along the midrib, and accented with bumps.

The flowers are small and pale red.

The fruit is oblong and is quite similar to the Chevreuse. But it's bigger, not very round at the middle, sort of angular or ribbed and strewn with small bumps. A more conspicuous one at the stalk appears to be an excrescence.

Its skin is a beautiful red on the side in the sun.

The flesh is white, firm, but nonetheless succulent. It's light red next to the pit.

The juice is very enjoyable, with a refined delicate flavor; sometimes it's ever so slightly tart.

The pit is quite big, long, flattened on the sides, and terminates in a long point. It often ruptures inside the fruit. The pits are said to propagate the trees without degeneration.

This peach ripens in October & November. Although it's the latest of all the peaches, it's nevertheless an excellent one. Most gardeners confuse it with the Nivette.

XXXIX. *PEACH TREE of [Palense?Pau?]*

PEACH of Pau [*Translator's note*: a town in the Pyrenees].

This is a beautiful tree. Its shoots are green & vigorous. The leaves are large and deep green. It puts out small flowers. The fruit is big, well rounded, & terminates in a large, extremely prominent protuberance that curves over like a hood. The flesh is white, tending a little to green, and is soft when the fruit is completely ripe. The juice is refined & quite enjoyable. The pit often splits open inside the fruit.

Merlet & some gardeners draw a distinction between two *Pau* peaches. One is round, *i.e.* the one I've just described. The other is long

very liable to rot inside, & furthermore it's less well-reputed than the round one.

I've discussed the Pau peach not so much to suggest cultivating it but rather to retain its name & the notion of it. It ripens so late that it only can succeed in a warm & dry autumn & it requires the best of exposures. The latter would be much better occupied by many other excellent kinds of peaches.

XL. *PEACH TREE with large, semi-double flowers.*

PEACH TREE with semi-double flowers. (*Pl. XXX.*)

This is quite a beautiful peach tree, but it's not very fruitful.

Its shoots are of average strength.

The leaves are beautiful, dark green, and uniformly terminate in a very sharp point. The denticulation is delicate & barely perceptible.

The flowers are large and are composed of fifteen to thirty bright pink petals that pale somewhat when the flowers begin to fade. And one, two, three, or four pistils & a number of fairly large stamens depending on the extent to which the petals have developed. This is a wonderful tree when it's in full bloom.

It sets single, twin, triple, or quadruple fruit. The triples & quadruples fall off early. Some of the twins & a large number of singles reach maturity. The latter are medium-sized, oblong, twenty-one or twenty-two *lignes* in diameter & a little more than that in height. They're rarely uniform or nicely shaped. Almost all of them are more enlarged at the tip than at the end near the stalk, which inserts into a narrow but deep cavity. Some have a small protuberance; others have none at all. On some of the fruit the groove penetrates down to the pit;

on most of them it's not very distinct except at the top & near the stalk.

The skin is downy, yellowish green, and sometimes slightly tan on the side toward the sun.

The flesh is white & the juice has quite a pleasant flavor.

The pit is an inch long, eight *lignes* wide, six *lignes* thick, flat on one side, very convex on the other, and terminates in a very sharp point. It's roughly fissured though not very deeply.

This fruit ripens at the end of September.

XLI. *PEACH TREE with large flowers and fruit with skin & flesh that's red like blood.*

SANGUINOLE. BEET PEACH. DRUSELLE.

This is not a large tree but it produces quite a lot of fruit.

The shoots are slender & are deep red on the side facing the sun.

The leaves are moderately large and denticulate on the margins. They turn red in the fall.

The flowers are large and pink.

The fruit is small & quite round.

Its skin is dark red all over & very full of red down.

All of the flesh is as red as a beet & a bit dry.

The juice is acrid & bitter, unless it turns warm at the end of September & the beginning of October.

The pit is small & deep red in color.

This curious peach, which is as good in a compote as it is un-enjoyable when fresh, ripens after mid-October.

The CARDINALE (*Pl. XXXI.)* is pretty much the same kind of peach, but very much bigger, better, & less covered with down.

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XLII. *Fruitful dwarf PEACH TREE with large single flowers.*

Dwarf PEACH TREE. (*Pl. XXXII.*)

This peach tree grows no larger than an apple tree grafted onto a Paradis. So it's sometimes raised in a container so that it can be placed on the table with its fruit.

The shoots are stout & very short. They have so many buds on them that they almost overlap one another like fish scales.

The flowers are as large as those of the white Madeleine. They're very pale pink, almost flesh-colored. The bottom of the flower has a little more red in it. The stamens are white & their tips are brown. The stigma of the pistil is yellow. These flowers don't fully open, even though the petals are not very concave. The flowers encircle the branch & are set so close together that there's no room between them. A single branch three inches long bears up to forty or forty-five flowers, which makes a very pretty bouquet.

The leaves are very long & beautiful, deep green and pendent. Most of them fold along the central vein & curve in an arc on the midrib side. The denticulation is large, extremely deep, & sharp. The bidenticulation is fine & very sharp. The midrib is white & very prominent. The color, length, number, & arrangement of its leaves make this small tree look different than other peach trees. The leaves are five to seven inches long, twelve to fifteen *lignes* wide, and are attached around the branch by short & thick stalks set two or three *lignes* apart from one another.

The fruit is round, quite big, & is plentiful relative to the size of the tree. One of these little peach trees whose top is only nine or ten inches wide sometimes bears eight or ten peaches. The fruit is two inches in diameter & the same in height.

A deep groove divides it lengthwise; it terminates at the end near the stalk in a narrow & not very deep recess & at its top in quite a sizable indentation. Usually the indentation is bright red in the middle and no protuberance is visible. At this end of the fruit the flesh around the pit is the same color.

In rare cases the skin takes on a little color. The flesh is succulent, but the juice usually is tart & bitter. The pit is small & white.

This very mediocre fruit, cultivated only as a curiosity, ripens about mid-October.

At first I got these peaches from the small trees of Orléans and propagated them by planting the pits. The resulting trees yielded peaches even worse than those from the trees in Orléans.

XLIII. *African dwarf PEACH TREE with red sterile double flowers.*

Double-flowered dwarf PEACH TREE.

Because this small tree yields no fruit at all, one doesn't know whether to list it as a peach tree or as an almond tree, or if it shouldn't even be thought of as a plum tree.

It persists very much as a dwarf. It produces a lot of very doubled pink flowers shaped very much like those of the peach tree.

The shoots are slender & red on the side facing the sun like those of most peach trees.

The leaves when they emerge from the bud are rolled up one inside the other like those of plum trees. When viewed from above, furrows indented in the veins are visible as on the leaves of plum trees. From below the veins appear more prominent than they are on peach tree leaves. But the leaves are oblong like those on peach trees

though slightly wider relative to their length. Moreover their green color also resembles that of peach tree leaves.

Furthermore, this tree should be grown only in ornamental gardens.

CULTIVATION.

I. THE PEACH TREE, like all plants, bears fertile seeds suitable for propagation. But its seeds, like those of other fruit trees, rarely propagate true to type. Generally they only produce varieties of lesser quality. Nevertheless I've observed peach trees grown from pits that yield delicious & beautiful fruit in several provinces & even in vineyards around Paris. I've planted pits from the best peaches grown on espalier. Most of the resulting trees yielded fruit that connoisseurs often prefer to those grown on espalier. Some have remained true to type & without alteration; on others the shape & size of the fruit deteriorated. Some yielded varieties that aren't very worthwhile. Several experts have tried the same approach and they got the same results.

From these studies & findings I conclude that: 1°. it's incorrect to believe, as some have claimed, that to raise good kinds of peach trees from seeds the pits must come from natural trees & not from grafts. 2°. peaches disdained as vineyard peaches aren't such in fact; it's because they're produced by almost wild trees growing from pits that came from poor kinds of trees planted or sown in those locations long ago. 3°. since grafting doesn't change the type at all, as shown in *The Natural History of Trees,* planting the pits is the only way to obtain new types & varieties of peach trees.

The origins of the Pomponne clingstone, the Andilly peach, the Belle de Vitry, the Chanceliere, the Courson Madeleine, &c. don't go back much before our own time. And it's pretty likely that the other fine kinds of peaches weren't sent to us from the Garden of Eden.

But those who are less given to hoping for new benefits and are content to enjoy the ones that they already have will maintain & propagate the good types of peaches by grafting.

II. Peach trees are grafted on their own stock and on almond, plum, & apricot trees. Although peach trees grafted onto peach trees raised from pits become beautiful & strong, nurserymen graft very few on the same stock, either because it's hard to obtain enough of the stock, or because they claim these trees are too vulnerable to gummosis. I suppose that this concern is well founded, but I have some regrets about having accepted it without further scrutiny. I hope that investigation can discover at least some kind of peach tree that is suitable for producing stocks without this defect. It also seems to me that too few of them are grafted on apricot trees raised from pits; I've seen them succeed very well in ground where plum & almond trees fail. These latter two are the stocks most used for grafting peach trees. The first is suitable for soil that isn't very deep provided that it's not too dry. The almond tree forms a taproot & its roots go deep. It adapts better to loose sandy soil as long as it's deep enough. All kinds of peach trees graft well on the black damson plum tree, the Cerisette, or even better on the St. Julien. The almond tree also works well for all of them. "Experience," says M. de Combes, "has convinced everyone whose job it is to raise trees around Paris that the Violette & the Chevreuse peaches only succeed well on the St. Julien-Jorré plum tree". In matters of this kind

experience provides incontrovertible proof. Nevertheless, only five leagues away from Paris I've seen extremely fine Violette & Chevreuse peach trees grafted on almond trees & planted on two espaliers, one facing south, the other to the west, in soil of good quality, though heavy & dense. They yield excellent, very attractive and very abundant fruit. That kind of terrain could be an exception. I must add that the plum tree always seemed to me to be a poor stock for some kinds of peach tree grafts, of only average quality for the rest, & much inferior to apricot & almond trees.

The dormant bud graft is the only suitable graft for a peach tree. It's done on plum & on old almond trees from mid-July until mid-August - a little later on apricot trees. And on young peach & almond trees from mid-August until mid-September or more precisely when the second rise of sap in whichever stock is used is subsiding. That may come earlier or later depending on how the season progresses. The bud graft should contain a double or triple bud & not a single one.

III. The peach tree is definitely not a tree for all climates. It can't survive in southern America or in countries below or near the tropics. Italy and even Provence don't have our delicate peaches & have to be satisfied with their clingstones that succeed only rarely and indifferently in our own climate. The tree is entirely unknown in northern America and in all northern regions. So the temperate climate is the only one that suits it. The Paris region doesn't enjoy the benefit of peach trees growing normally in open ground the way they do in several provinces not as far north. But the many excellent kinds of peach trees that do grow there successfully yield abundant fruit

with beauty & refined & delicate flavor unknown anywhere else. They compensate well for the laborious & costly cultivation that they require. So whatever the conditions of the soil, temperature, the growers' skill, or these three combined, the peach tree seems to beautify & enhance the attributes of this particular region of Europe.

Even though the peach tree adapts to all kinds of soil as long as it's fit for cultivation, nevertheless the tree won't acquire the same strength nor does its fruit achieve the same quality everywhere. In thin, arid, or clayey soil the peaches are liable to become mealy, & lacking sustenance, the majority drop before they're ripe & the trees often are afflicted by gummosis. In rich soil with loam not far below, the peach trees become beautiful & fruitful, but the fruit usually is bland or has an unpleasant tartness depending on the type. It's common practice in damp & cold soil to plant only peach trees that are grafted on plum trees, & in warm & dry soil peach trees grafted on almond trees. Based on my own experience I believe that this distinction is useless, provided the soil is sufficiently deep.

Complete success can be expected from peach trees planted in soil that's gentle, friable, substantial, deep, and doesn't suffer either from too much or too little moisture.

IV. In our climate only a few kinds of peach trees such as the Bourdin, Persique, and the Chevreuses do well in open ground. The others, either too delicate or too late-ripening, need a wall to protect them or to ripen their fruit (*). The nature of the soil & the type of peach will determine the appropriate exposure. 1°. No kind of peach tree can ripen when

(*) Space on espaliers is too valuable to be taken up by peach trees raised from pits where the quality of the fruit is as yet still undetermined & just as often can be poor or mediocre as well as good. They're planted in open ground & they usually do quite well there.

facing directly north. 2°. Clingstones & late peaches are able to ripen only when facing south. 3°. In cold & damp soil, a full southern exposure, or one only slightly inclined to the east or west is necessary for most types. 4°. In loose & warm soil peach trees can be planted from northeast to northwest, placing each kind in a more or less southern exposure depending on how much sun its fruit needs to completely ripen. 5°. Most often cultivating the peach tree with a westward exposure is unproductive, unless the soil is loose & the espalier is protected from damaging winds by nearby woodlands or mountains.

V. Planting a peach tree doesn't require any special care. For this topic I refer the reader to the section on general cultivation. I'll point out only that the tree must be lifted more carefully leaving longer roots than for other trees. 1°. This is because plum & almond stocks on which they're normally grafted are gummy and their wounds don't heal up well. Furthermore, the closer to their origins that the large roots are cut, the larger are the wounds. 2°. They take root again with difficulty, especially the almond trees. Moreover, the farther back the large roots are cut, the fewer tender parts suitable for producing new roots remain. Therefore the roots must be at least twelve to fifteen inches long, especially on trees with a trunk; or more precisely, they should be healthy & intact down to where they noticeably begin to decrease in size. I've thoroughly examined peach trees that died within four or five years after being planted, & almost always I've found that they died because the large roots were all or mostly rotted without having healed & produced any new growth.

The season for planting this tree is from mid-October

until about the beginning of March during the entire time that the sap is not running.

VI. If the kinds of peach trees that tolerate being out in the open or raised from pits are planted in vineyards, they will benefit from fertilization, tillage, & methods used in vineyards and will become quite beautiful but they won't live very long. If the vine-grower tops them off or does major pruning from time to time, it prolongs their life & with this treatment some of them have lived more than thirty years. These same peach trees raised as bush trees in a kitchen garden, pruned & cultivated, live even longer. When planted on espalier, managed competently & skillfully pruned, they won't die much sooner than the most vigorous of espalier trees. On the other hand, pear trees & most fruit trees planted in orchards, when left to grow freely and not pruned, live very much longer than on espalier. What accounts for these disparate results from the same cause, pruning? One need not look beyond the procedure itself.

Other kinds of fruit trees manage themselves more or less intelligently (I'll be free with these terms). They control their productivity according to their age and their strength. First of all they form their character: they yield fruit only as long as their fruitfulness won't hinder their growth & alter their constitution. A single branch will produce only as many new ones as it can nourish without weakening itself. All of the tree's parts in proportion to their number, strength, and size contribute in equal measure toward their growth & preservation. Curtailment & reductions as a result of pruning are just so many injuries to their strength. They don't give them a pleasing shape & force their productivity as much as they hasten their ruin. For it must be said that despite the opinion & common practice of gardeners, the less that trees are curtailed by pruning,

provided that they can be trained without clutter, the greater the satisfaction that one can expect from them.

The peach tree has a propensity to grow with excessive zeal & to reward its grower. But it depletes its nascent energy in premature productivity & prepares the way for an impending downfall by overloading itself with a large number of branches for which it's unable to provide sufficient nourishment. So it often has to give up on a part of itself that dies of insufficiency, & by constantly overdoing its own efforts it succumbs within a few years. So some suitable technique must be used to restrain it without deterring it, to moderate its zeal without eliminating it, to establish a proper balance between its labor & its vigor & to maintain it at a reasonable level of activity that sustains its strength & prolongs its life. The technique is pruning.

VII. But pruning requires so much care & precision that a well-pruned peach tree is looked upon as the gardener's masterpiece. Indeed there's nothing inconsequential about it: if pruned too long, it thins out; too short, it produces only branches. If too full, it becomes cluttered; if too empty, it's ruined by suckers & false wood branches. A mistake in pruning a pear or an apricot tree &c. can be repaired. If it's been lengthened & filled out so as to overwork it & make it bear fruit, it can be restored. The branches, even the oldest ones, when cut back will produce new ones that restore the fullness, the shape, & the evenness of the tree. It's not the same with the peach tree. Buds that haven't opened in time stay closed permanently. A branch growing where one had been previously pruned rarely grows in the right place. Once the tree has taken on a poor habit it's very difficult to correct it. Consequently, mistakes once made usually can't be repaired. Still, we needn't always give up hope. A dozen peach trees planted against a wall in an enclosure were so neglected or even forgotten

for seven or eight years that they grew like trees that were left in the open with quite a beautiful top set on a trunk and extending above the wall. I wanted to re-establish the espalier. I planted young trees between the older ones & sacrificed the latter as an experiment. I sawed off the trunks four inches above where they'd been grafted & covered the cut with earth kneaded in a mortar. All of them except one re-grew & became fine & attractive trees that made the new plantings superfluous. This result proves that the peach tree is not without its own resources. However, since the tree is perhaps rather unique, we can't always count on the same successful result.

The rules for pruning that we've set out in the discussion on general cultivation would suffice for a skilled grower to manage a peach tree well. But so that no one is liable to misapprehend in that treatment the most important & most difficult points about peach tree cultivation, we'll include here the most widely accepted & successfully performed methods. To avoid useless repetition, we refer the reader to the section on general cultivation for the management of young trees during their early years. We recommend only that the rules be observed more strictly for peach trees than for any other tree.

METHOD OF BROTHER PHILIPPE.

"Once the primary branches have formed, I'm no longer concerned about suckers. If some emerge above the primary branches, I believe they should be cut off unless there's an absolute need to fill a space where a large branch has died. Here are my reasons for cutting them off: since the buds are situated very far apart from one another, these branches have to be pruned extremely long & there's a risk of depleting the bottom of the tree because

these branches, that consume a lot of sap, will harm their neighbors. Furthermore, these branches almost always grow perpendicularly, & since they're very big, it's difficult once they've been pruned to make them take on a desired shape. Additionally it would need to be a very vigorous tree to sufficiently nourish the number of suckers to be saved. I imagine that the mature tree would have quite enough branches so that the roots won't suffer at all if several suckers are cut off. If the tree is too vigorous & has to be restrained, I'd prefer to fill it out by pruning the natural branches or even leaving it with a lot of twigs rather than saving the suckers.

"Regarding branches of medium strength with their buds quite close together, most of which are triples, these are the most valuable ones. They're the ones that grow the best branches & the most attractive fruit. So in general some of them should be saved & pruned fairly long, depending on the strength of the tree. But since the main purpose is to obtain fruit, there is a difficulty that's dealt with poorly by a number of gardeners. Since the good fruit buds usually are situated quite far from where the branch originates, the gardeners' urge to obtain fruit makes them prune these branches extremely long. In this case the most common result will be that the most vigorous branch will emerge at the end of the branch to be preserved, & there's a risk that the base will thin out. On the contrary, if the branch is pruned short to avoid this problem, it clearly will be necessary to forego the fruit. Here's how to get out of this difficulty: of two good branches nearby, one must be cut back to two or three buds to obtain wood branches

& the other one left very long to obtain fruit. The best-situated branch is always the one to prune short for wood branches. As to the fruiting branch, it won't spoil the tree at all, because as of that moment it's destined to be cut off after a year or two. That's the surest way to get lots of fruit and at the same time to perpetually renew the wood branches with vigorous young branches.

"With regard to twigs or stunted branches, you can't say much for them. The fruit that they bear often falls off before it's ripe; or else it gets quite mealy & tastes bad compared to fruit that grows on fairly strong branches. So those branches have to be cut off unless one wants them there to moderate a tree that's too vigorous. However if better branches are needed to fill in a gap, they can be pruned back to one bud. If the tree has any vigor at all, a good branch often will emerge from them. Moreover, among these twigs some are weaker than others & some of them are nearly as strong as good wood branches. In that case, in the absence of others that are more vigorous, some of them can be pruned for fruit.

"When peach trees are mature, in their prime & in full productivity, they should not continue to be filled out a lot as some gardeners do. If they were treated as though they were young trees, they wouldn't last very long. They should be filled out only in proportion to their strength, preserving their vigorous branches & those in a position to fill in gaps. At this point those who know how to prune peach trees will follow different procedures.

"The one that I've adopted consists of cutting off suckers, unless they're needed to fill in a gap, and to prune short the branches of average strength in order to generate new branches

& to renew the tree. That's why branches that are very low always must be chosen for this purpose & to prune long several branches in order to obtain fruit. But they must be cut off when they grow too long and could spoil the beauty of the tree, or when they've been exhausted by the quantity of fruit that they've produced. To get good fruit, try to select vigorous branches for this purpose; if it's necessary to take those of average strength, they must not be pruned very long. It should be concluded that all stunted branches ought to be cut off except for the small short branches that are especially destined to yield fruit.

"All branches that are thin, worn out, & insufficiently productive should be entirely cut off. However if such a branch can't be replaced by another vigorous one, to avoid leaving an empty space it can be cut back hard above the better branches that it will produce and that would need to be pruned short, just like branches that are intended to yield fruit. Care must always be taken not to overload branches that aren't very vigorous.

"According to my method of pruning, on branches in good condition two branches among those that they've produced are saved. The strongest & best situated, usually the lowest one, is pruned short to generate wood branches. The other one is pruned long in order to yield fruit. Of course this rule can be set aside if the tree isn't very vigorous & there's a gap to be filled. In that case, one can forego getting a lot of fruit & prune both branches to obtain more abundant wood.

"As to trees that begin to decline early instead of growing further, all stunted branches that wear out the tree & only yield poor fruit must be cut off even more rigorously.

Suckers that would greatly weaken these old trees must also be removed. Only the good branches must be kept & they're pruned quite short. But some forethought is appropriate here. If only one branch is seen that won't last long, one should try to find a vigorous branch and to prepare it by pruning to subsequently fill the space left by the weak branch when it has to be removed. With such foresight I've witnessed a big branch cut off & its place filled right away by branches that have been prepared in advance."

Nota. This method, the one that follows, & the one laid out in the section on general cultivation have no use for suckers & false wood branches. There are certain exceptions that are very infrequently practiced by the majority of gardeners, but I believe they ought to be much more so.

The vigor & the origin of a branch generally are enough to identify it as a sucker & to have it rejected as such without further examination. But several causes can give rise to such a vigorous branch, whether it's a sucker or not: pruning too hard or thinning out too much; a branch that's bent or trained almost horizontally; a cut made too obliquely that opened up the last bud so that it died or only produced a weak shoot. Gardeners often make this mistake when they begin their cut below the bud stem above which they're pruning. In these last two cases, do these vigorous branches have to be cut off? Isn't it better keep them, prune them, & cut them back hard above the last pruning, if what they've produced beyond that point is weak & in poor condition? In the first case, removing them & continuing to prune hard will compound the injury. The tree must be trimmed less, pruned longer, the suckers preserved

(except for cutting them off later if they become useless or detrimental) that can be positioned without cluttering, & removing the rest.

False wood branches likewise arise from pruning too hard. It doesn't leave enough of an outlet for sap to flow and causes it to flow back into previous prunings. Also branches that are too old, worn out, full of calluses, knots, sharp bends, stubs and scars that impede the passage of sap too much force it to avoid these obstacles & to open up passages that deviate from its natural course. Since the first cause is the same as one of those that produces suckers, false wood branches are treated the same way. The branches generated by the latter causes are valuable. Cutting them off frustrates the tree's effort to renew itself; it means branches that are useless, or close to becoming so, are preferred over branches that are capable of replacing them to advantage.

Small shoots of false wood grow out only during the second run of sap & usually result from nipping buds too soon or too severely. They're retained only when there aren't any better branches.

Since most disorder in the growth of trees results from gardeners thinning the tree too much & pruning it too short, it's fair to ask to what length the branches must be pruned & how much the tree can be filled out. We've already said that these questions can be answered only by looking at the tree itself, observing its type, condition, vigor, &c. However we can say in general that for a tree in its prime & in good shape, one can prune all branches that are well situated & in good condition and that can be trained without cluttering. The pruned branches won't be too long at all if they're pruned slightly in front of where they begin to diminish in size. The length of fruiting branches is usually determined by the location of their flower buds.

Consequently a sucker shoot or a false wood branch about seven or eight feet long sometimes can be pruned to three feet & even more, & the other branches proportionately. But is there no risk at all that a tree pruned to such length won't overextend & thin out? 1°. If the tree doesn't spread enough, we agree that it's been cut short, cropped, or mutilated. If its spread is just right, why begrudge it & stand in the way of its inclination to achieve that? 2°. It's rare that a strong shoot doesn't grow several small branches along its length in the same year. The best ones can be trimmed & they insure against gaps. If none at all grow out, bending the shoot down almost horizontally will allow sap that normally would only penetrate it moderately to act upon most of its buds & will open some of them.

These observations, which we have alluded to elsewhere, are important for all trees & especially for peach trees. We can't disregard them, in spite of our decision to not discuss what we do ourselves about all aspects of tree management & to simply set forth the practices of the best gardeners & some of the principles on which they appear to be based. We've largely held to this resolve, only infrequently & reservedly offering our own doubts, thoughts, or different practices & personal opinions.

METHOD OF M. DE COMBES.

"Peach trees that are in their prime I call second stage trees; third stage trees are those that are somewhat in decline. The latter can't be managed too carefully; they have to be pruned hard & only on the best branches. The small ones absolutely should not be saved, because on old stock they only yield meager fruit.

"If by chance a rather vigorous branch happens to emerge from the base of one of these old trees & it's able to renew the tree, it must be treated with this in mind. It must be carefully saved to replace the old branches that are gradually eliminated. But if it comes out of an old branch, it must be removed. I've nothing more to say about these old trees except that they should be husbanded in spite of their old age only when they still produce good fruit. As soon as this is no longer the case, they must be pulled up.

"The second stage trees that are fully productive are the ones that create our wealth and they deserve the most careful attention. Most gardeners who work unscrupulously, injudiciously, & without forethought manage them in a way that soon leads to their ruin.....

"The pruning operation is the one that contributes most of all to the trees' permanence. Keep them well filled out but don't overburden them. That's the whole art of pruning. It seems quite simple, but there are problems regarding the selection of branches, the tree's own effort, the type of fruit, & many other situations for which there are applicable rules. I won't discuss at all special cases which only can be resolved on the spot & learned only by experience.

"Everyone has his own method & performs the pruning according to his own ideas. Some prune all branches hard. (*Those who do that forego plentiful fruit & wear out the roots of their trees.*) Others lengthen the branches that they intend to yield fruit & leave spurs to provide branches the following year. (*This is Brother Philippe's method.*) Mine is completely different.....

"With my tree in good condition, after the branches have been loosened from espalier

I start to search for worn out branches, which are easy to recognize because they're thin & have formed poor shoots. I cut off the worn out branch at the point where it emerges from the large branch, unless it has put out a good branch further along it. I cut it back above that point if there's nothing nearby to fill the space. I then go to the present year's branches, & if any big ones have emerged I remove all of them. By big branches I mean all those that are greater than average size. I likewise remove all the small ones, unless I need one to fill in a space or for some other use. In that case I prune it where its thickness is about the width of a one-crown coin. I always make an exception for small flower clusters.

"Having completed this initial pruning, only the branches that are equal in strength remain. It's at that point that I see my job clearly. In the end I have to do no more than adjust their quantity, & here's my rule for that: I leave only one of all those that have grown out from the branch that I had pruned the previous year. I leave the lowest one because it's always a good one due to the precautions that I took while nipping the buds. Those who haven't already performed this procedure will select the best of the lowest ones.

"After this second adjustment I turn to the third one which is to prune these branches. At this point I check to see if my tree filled out a lot during the previous year, & what kind of tree it is. Depending on these two conditions, I'll shorten or lengthen my pruning. If my tree is very full I'll manage it carefully. And if for example it's a Madeleine or a Violette, I'll let it fill out more since these trees are more vigorous than the others. But if it's any other type of tree, & if it hasn't been worn out by its burden, I lengthen my pruning up to eight inches if space permits. But if I find that my space is restricted

& if I have nothing below it to replace the worn out one, I prune it hard & allow it only three or four inches. It generally happens that because of the different arrangement of the spaces, half of my branches are lengthy & the other half are kept short. That way I keep the tree full & don't wear it out at all".

The people in Montreuil cut off all weak branches equally, & in fact they only keep the medium strength ones when strong ones are lacking; they prefer to prune the latter. Their trees are not very full & they prune the strong branches to three or three-&-a-half feet long. They often prune for fruit a portion of the small branches that emerge from these strong branches. Since they quite reasonably plan to get attractive fruit, this way of pruning only the vigorous branches that can nourish it well is appropriate for accomplishing their goal. But in spite of the care that they take to open up their trees, they soon thin out at the bottom. Young peach trees planted between the old ones will fill in the gaps that the latter leave on the espalier & will correct the problem. But we know how rare it is to find terrain similar to that in Montreuil as well as growers who are as wise & experienced as they are. Besides, their procedures aren't absolutely all the same. They vary according to the approaches of different individuals. Some are concerned only with what the trees produce, & others broaden their interests to care about their shape & how long they last.

As to other procedures such as training, disbudding, &c. there's no point in repeating what's been covered in Vol. I. under General Cultivation.

Peach trees grown from pits, the Bourdin, & some others that succeed quite well in the open either as standard or as bush trees & which in favorable seasons yield excellent fruit there, ought to be pruned, disbudded, & managed like those on espalier. But it's satisfactory & it's usually enough

to rid them of suckers and branches that are dead, worn out, and too weak. And to prune the good branches, less with a view to giving the trees a uniform shape than to prolong their existence, to maintain their strength, & to use them to sustain useful production.

Peaches should be uncovered with great care & gradually allowed to become accustomed to the sunshine necessary to give them beautiful color & to develop their flavor. They must be picked only when they're completely ripe; that's easy to tell by their color & the ease with which they come off the tree. It's a good idea to leave them for at least several hours in a cool place before they're eaten. Even those that need to be transported should be picked only a very short time before they're fully ripe. If the peaches form much of their juice when off the tree in a fruit loft or elsewhere, the juice often is unpleasant & always is of poorer quality than that formed while they're still on the tree.

U S E S.

Peach tree leaves boiled in milk are given to children as a vermifuge. Peach tree blossoms when eaten in a salad are a strong purgative. A syrup made from them has the same property. Peach kernels have the same qualities as bitter almonds.

Peaches are eaten fresh, with or without sugar. They're stewed in boiling water (they're cooked about the same time necessary to cook a fresh egg) & dusted with sugar. They're eaten in fritters, compotes, marmalade preserves, made into brandy, oven-dried, and pickled in vinegar. For the last two, clingstones are preferred to soft peaches.

Opinions all agree about the fine flavor of fresh peaches, but there are different views about digesting them. In some they bring on fever & are hard to digest unless they're improved by taking them with wine & sugar or even by cooking. Others who digest them easily, especially the soft peaches, view them as very healthy fruit.

PRUNUS,
PLUM TREE.

GENERAL DESCRIPTION.

THE PLUM TREE is a medium-sized tree that while it's still young puts out straight & vigorous branches that create a very pleasing habit. But it soon becomes disfigured because its fragile branches break under the weight of its fruit or give way to the force of the wind, & all that's left is a distorted, damaged, irregular, and shapeless tree.

Inside the buds the leaves are folded on top of one another. They're simple and are attached alternately on the branch by thick, stiff, & short stalks. They're ovoid in shape and come to a point at both ends. They're fairly large & the denticulation on the margins is more or less deep, blunt, &c. depending on the type. The outer side of the leaf is accentuated with prominent veins & the inner side is scored with deep grooves corresponding to the veins making the surface rough & uneven.

The flower consists of 1°. a calyx in a single unit, concave like a shallow cup and divided at its margin into five oval sections that are hollowed spoonlike and sometimes are reflexed onto the cup. 2°. five white petals arranged like a rose. Their size & shape differ according to the type. Sometimes they're hollowed spoonlike. 3°. twenty to thirty white stamens that terminate in yellow tips. 4°. a pistil

with a style surmounted with a stigma, resting on a fleshy ovary.

The fruit varies in size & shape depending on its the type. It has a smooth skin & has no down, but it's covered with a whitish powder called bloom. The color, consistency, and flavor of the skin varies; on some it's adherent and peels off easily on others. Its flesh is succulent & also varies in consistency, color, & flavor. At the center of the fruit there's a woody pit that varies in shape & size. It's hard, flattened, rough, and sometimes slightly fissured. It contains a bitter kernel covered with a skin & consisting of two lobes & a germ. Most plums hang from the branch on long & slender stalks that insert into a more or less hollow cavity at the end of the fruit. Some are flatter & are divided from the top to the stalk by a groove; others are round around the middle. All of these are differences in the fruit, flowers, & leaves that determine the types & varieties of plum trees. We'll omit many of them that are of no interest in terms of their fruit or any beneficial feature.

TYPES AND VARIETIES.

I. *PLUM TREE with small, long, waxen early fruit.*

Yellow early PLUM. Catalonia PLUM. (*Pl. I.*)

This plum tree grows to an average height. It's very fruitful.

The shoots are slender, very long, and light gray. Their tips are purple.

The buds are small and their stems aren't very prominent.

The flowers are thirteen *lignes* in diameter. The petals are longish, six *lignes* by three *lignes*.

The leaves are light green, oblong & narrow, uniformly & not very deeply denticulate. They're three-&-a-half inches long & two inches wide. Starting at their widest point, a third of the way from their tip, they narrow substantially & uniformly toward the stalk, which is about ten *lignes* long.

The fruit is small, about fourteen *lignes* high by twelve *lignes* in diameter. It's oblong, bigger at the top than near the stalk and usually divided lengthwise by a not very deep groove. Sometimes there's a slight ridge instead of the groove. The stalk is very slender, about four or five *lignes* long and set into a very small recess. The top of the fruit terminates in a small indentation.

Its skin is yellow, slightly tart, tender or crisp when the fruit is fully ripe.

Its flesh is mushy & a bit gross.

The juice is sweet, sometimes a little musky. It's often tasteless & not very plentiful.

The pit is rough, eight *lignes* long, four-&-a-half *lignes* wide, and three *lignes* thick. It separates almost completely from the flesh.

On a south-facing espalier this plum ripens at the beginning of July; around mid-July out in the open. It makes quite good compotes.

II. *PLUM TREE with small, black, oval early fruit.*

Tours EARLY PLUM.

This tree is vigorous & fruitful.

The shoots are strong & very deep purple.

The flowers are an inch in diameter. The petals are well rounded

on their margins, a little wider than they are long, and concave like a spoon.

The leaves are close to four inches long and two inches six *lignes* wide. They're much narrower near the stalk, where they come to a point, than they are at the other end. They're finely & not very deeply denticulate. The stalk is light green, thick, and nine to fifteen *lignes* long.

The fruit is small, oval, and decreases in size equally toward the top & toward the stalk. It's quite round at its midpoint and the groove is almost undetectable. The stalk is slender, six *lignes* long and is set in a very small recess. It's thirteen-&-a-half *lignes* long & eleven-&-a-half *lignes* in diameter.

Its skin is black with a lot of bloom on it, leathery, slightly bitter, & is very adherent to the flesh.

Its flesh tends to be yellow. It has some light red streaks along the ridge of the pit.

The juice is quite plentiful & pleasant. It has a slight fragrance when the tree is planted in warm & dry soil.

The pit is very rough and adheres to the flesh. It's seven-&-a-half *lignes* long, four-&-a-half *lignes* wide, three-&-a-half *lignes* thick and a lot wider near the stalk of the fruit than at its tip.

This plum ripens before mid-July & isn't at all bad for an early plum.

III. *PLUM TREE with medium-sized, long, beautiful purple early fruit.*

LARGE early BLACK. Montreuil BLACK.

This plum, which is often confused with the large damson of Tours, is sixteen *lignes* long by fourteen *lignes* in diameter. It's oblong in shape.

Its skin is a beautiful purple with a lot of bloom on it, leathery, & very sour when chewed.

Its flesh is firm, quite delicate, and light green verging on white. It turns yellow when completely ripe.

The juice is quite pleasant, enhanced with a slight fragrance, so even though it isn't sweet, it's nevertheless not bland.

The pit separates from the flesh except at its tip & along its ridge where a little of it remains attached. It's eight *lignes* long, five-&-a-half *lignes* wide, and three-&-a-half *lignes* thick.

It ripens about mid-July, which makes it sought-after even though it's vulnerable to worms. The early yellow plum is much inferior to it in quality.

There's a round plum, much bigger than the one above, that ripens almost as early and has the same color, which also is called large early black. But it's flavorless & its flesh is gross.

IV. *PLUM TREE with medium-sized, rather longish, deep purple fruit.*

LARGE DAMSON PLUM of Tours.

This plum tree grows tall. The flowers are liable to abort when it's planted in the open.

The shoots are stout & very long. They're reddish on the side toward the sun, green verging on yellow on the shaded side and covered with a thin whitish epidermis.

The buds are small and very pointed; their stems are big & prominent.

The flowers are eleven *lignes* in diameter. Two or three of them emerge from the same bud, often with two small leaves. The petals are round.

The leaves are large, three inches nine *lignes* long and two inches wide. They come to a point at the stalk, which is purple and eight to ten *lignes* long. The other end is almost elliptical. The denticulation is quite fine & deep.

The fruit is oblong and medium-sized. It's fourteen *lignes* long & thirteen *lignes* in diameter.

There's almost no lengthwise groove dividing it.

Its skin is a deep purple with a lot of bloom on it. It's tart, slightly leathery and adheres to the flesh.

The flesh is almost white; it's firm & tender.

The juice is sweet & has the fragrance of a fine damson. If the skin, which doesn't separate from the flesh, didn't transmit an unpleasant sourness to the juice, this would be a delicious plum.

The pit is rough & doesn't separate well from the flesh.

The fruit ripens in mid-July or shortly thereafter.

V. *PLUM TREE with medium-sized, long purple fruit.*

Purple DAMSON. (*Pl. II.*)

This is a vigorous tree but it yields little fruit.

The shoots are long & thick, deep red-brown bordering on purple, lighter on the shaded side, and covered with dull white down.

The buds lie against the branch. They're often double or triple at the thick part of the shoot. Their stems are grooved.

The flowers are thirteen *lignes* in diameter. The petals are oval-oblong. Two or three flowers emerge from the same bud, & frequently two pedicels adhere to each other for almost their entire length.

The leaves are three inches long and twenty-six *lignes* wide. They're much narrower toward the stalk than they are at the other end where they're round. The denticulation isn't very deep & is shaped like the arcs of a circle. The stalk, which is ten *lignes* long, and a part of the midrib are a red color.

The fruit is medium-sized, oblong, thirteen-&-a-half *lignes* in diameter by fifteen-&-a-half *lignes* long. The stalk is quite thick & a little hairy. It's four to six *lignes* long and inserts into the bottom of a small cavity.

The diameter of the fruit is much smaller at that end than at the top. There's no discernible groove but only a minor flattening without an indentation.

Its skin is purple with a lot of bloom on it. It peels off the flesh when the fruit is very ripe.

Its flesh is yellow & firm.

The juice is very sweet but still retains a slight tartness.

The pit adheres to the flesh at only one small spot on its side. It's eight *lignes* long, six *lignes* wide, and four *lignes* thick.

This plum, which can be numbered among the best, ripens at about the end of August.

VI. *PLUM TREE with small somewhat rounded green to waxen fruit.*

SMALL white DAMSON. (*Pl. III.*)

This is a small fruit, almost round, and measures about an inch in each direction. It's attached by a slender stalk four *lignes* long that barely penetrates the fruit. Normally the fruit is slightly longer than it is in diameter. It's fuller at the tip than near the stalk. It's flattened at the middle so the distance from the groove to the opposite side in one direction is one *ligne* more than it is in the other direction. The groove is seldom discernible.

Its skin is leathery, yellowish green, and covered with white bloom.

Its flesh is yellowish and succulent.

The juice is quite sweet but it has a slight wild plum flavor. Nonetheless it's pleasant.

The pit is seven *lignes* long, four-&-a-half *lignes* wide, three-&-a-half *lignes* thick and doesn't adhere to the flesh at all.

This plum ripens at the beginning of September.

VII. *PLUM TREE with medium-sized, oblong, green to waxen fruit.*

LARGE white DAMSON. (*Pl. III. Fig. 2.*)

The large white damson is medium-sized, slightly oblong, & more enlarged at the top end than it is near the stalk. It's divided lengthwise more by a flattening than by a groove. It's fourteen *lignes* in diameter & fifteen-&-a-half *lignes* long. The stalk is about five or six *lignes* long, quite thick, and set into a very small recess. Its juice is sweeter & better than that of the small damson. The skin & the flesh have the same color & consistency. It ripens somewhat before the small damson does; the latter seems to be a variety of the large one.

VIII. *PLUM TREE with medium-sized oval fruit, deep red on one side to pale red on the other.*

Red DAMSON.

This is not a very fruitful tree.

Its shoots are very long, of average thickness, reddish, almost a lacquer color near the tip.

The buds are small and pointed. They lie against the branch and are not very far apart from one another. The stems are quite elevated.

The flowers are eleven *lignes* in diameter. The petals are oval and flat; some of them are slightly puckered along the edges.

The leaves are two inches ten *lignes* long and seventeen *lignes* wide. They're wide at the tip but get uniformly narrower & terminate in a point at the stalk, which is a whitish green and eight to ten *lignes* long. The denticulation is fine, sharp, and not very deep.

The fruit is medium-sized, oval in shape, and quite uniform. It's fourteen *lignes* in diameter and sixteen *lignes* long.

A groove dividing it lengthwise is completely, or almost completely, absent. The stalk is six *lignes* long, quite full, and attaches flush with the fruit or inside a very small indentation.

Its skin is covered with a lot of bloom. It's deep red on the side toward the sun, pale red on the opposite side, quite thin, and is not very adherent to the flesh.

Its flesh is yellowish, soft & delicate, without being mushy.

Its juice is very sweet.

The pit doesn't cling to the flesh. It's small, seven *lignes* long, five *lignes* wide, & four *lignes* thick.

This fruit, which has a slight tendency to get wormy, ripens in mid-August.

There's another red damson that's smaller, less elongated, & ripens later than the one above. It ripens about mid-September.

IX. *PLUM TREE with small, rather long blackish fruit.*

Late black DAMSON. (*Pl. XX. Fig. 4.*)

This small plum is oblong in shape. It's thirteen-&-a-half *lignes* long and twelve-&-a-half *lignes* in diameter. Its stalk is slender, four *lignes* long, and inserts into a small quite deep cavity. The groove that runs from the tip to the stalk has no depth to speak of & is discernible only by its color. The fruit is slightly smaller at the tip than at the stalk.

The skin is very dark purple, almost black, and is covered with a lot of bloom. It's firm & difficult to peel away from the flesh.

The flesh tends to be yellow on the side where it has been exposed to the sun & to be green on the other side.

The juice is plentiful & quite pleasant although it's a little tart.

The pit is seven *lignes* long, five-&-a-half *lignes* wide, & four *lignes* thick. The edge opposite the ridge

has a deep groove. It doesn't cling to the flesh at all.

This fruit ripens around the end of August. It's preferable to several kinds that are more widely cultivated.

X. *PLUM TREE with small fruit flattened on all sides and with richer violet color.*

Musk DAMSON. (*Pl. XX. Fig. 3.*)

This plum tree is average in size & fruitfulness.

The shoots are stout, quite long, yellowish gray, and very deep red-brown at the tip.

The buds are small, pointed, not very far apart from each other, and lie almost flat against the branch.

The flowers are eleven *lignes* in diameter and have oval petals. Two or three flowers emerge from the same bud.

The leaves are three inches three *lignes* long, two inches wide, quite finely & not very deeply denticulate. They're widest closer to the tip than near the stalk where they terminate in a uniform point. The stalk, from eight to eleven *lignes* long, & most of the midrib are cherry-red in color.

The fruit is small and flattened at the middle & at the tip & at the stalk. A very deep groove divides it lengthwise. The stalk, six *lignes* long, is white, slender, and is set into a not very deep cavity. It's somewhat uneven in shape. The large diameter is fourteen *lignes*, the small diameter is twelve-&-a-half *lignes* & it's twelve *lignes* high.

Its skin is very dark purple, almost black, with a lot of bloom on it.

Its flesh is yellow & quite firm.

The juice is plentiful with an enhanced & musky flavor.

The pit is six *lignes* long, six *lignes* wide,

and four *lignes* thick. It separates completely from the flesh.

This plum, called by some the Cyprus plum or Malta plum, ripens in mid-August.

XI. *PLUM TREE with small, oblong fruit changing from green to yellow.*

Dronet DAMSON. (*Pl. XX. Fig. 2.*)

The Dronet damson is a small oblong plum twelve-&-a-half *lignes* long by eleven *lignes* in diameter. It has no discernible groove or flattening dividing it lengthwise but only an almost imperceptible line. The stalk is slender, six *lignes* long and inserts into a very narrow & quite deep cavity.

Its skin is a light green that tends to get yellow when the fruit is ripe. It's slightly leathery, has little bloom on it, but it separates easily from the flesh.

Its flesh tends to be green. It's transparent, firm & delicate.

The juice is very sweet & has a pleasant taste.

The pit is small, six *lignes* long, four *lignes* wide, and three *lignes* thick. It doesn't cling to the flesh at all.

This small fruit ripens about the end of August; it's a very good one.

I don't know which plum is Merlet's Dronet damson. It bears no resemblance to the one I've just described.

XII. *PLUM TREE with nearly round, pale purple medium-sized fruit.*

Italy DAMSON. (*Pl. IV.*)

This is a vigorous tree; it blooms profusely & sets fruit well.

The shoots are big, deep purple on the side toward the sun, lighter on the shaded side.

The buds are big & their stems are very prominent & are grooved.

The flowers are eleven *lignes* in diameter. As many as four of them emerge from the same bud. The petals are oblong.

The leaves are rhomboidal or an elongated lozenge shape. They're finely, uniformly but not very deeply denticulate. They're three-&-a-half inches long and twenty-five *lignes* wide. The stalk is five to eight *lignes* long.

The fruit is medium-sized and almost round. It's fifteen-&-a-half *lignes* in diameter & fifteen *lignes* high. It's slightly flattened at the end near the stalk. The stalk is eight *lignes* long, of medium thickness, & is set into the bottom of quite a deep & very wide cavity. Its top end is rounded & not quite as big as the other end. The groove that divides the fruit lengthwise usually is quite conspicuous but is not deep.

Its skin is leathery and has a lot of bloom on it. It's a light purple that turns very brown when the fruit is very ripe.

Its flesh tends to be a bit yellow but inclines more to green.

The juice is very sweet & has an extremely fine flavor.

The pit hardly clings to the flesh at all. It's eight *lignes* long, six *lignes* wide, & four *lignes* thick.

This is a very fine plum. It ripens at the end of August.

XIII. *PLUM TREE with large nearly round pale purple fruit marked with yellowish-brown spots.*

Maugerou DAMSON. (*Pl. V.*)

This is a large & quite fruitful tree.

The shoots are short, stout, striated, purplish in color.

The buds are short, thick at the base and are not very pointed. They're appressed to the branch & are sort of stuck on it. Their stems are prominent & very broad.

The flowers are thirteen-&-a-half *lignes* in diameter. The petals are oval, six *lignes* long, four *lignes* wide and are slightly puckered on the edges.

The leaves are large, oblong, and very much narrower near the stalk, where they come to a point, than they are at the other end. They're four inches long and two inches wide. The margins aren't very deeply denticulate. The stalk is an inch long.

The fruit is big, almost round, seventeen *lignes* in diameter by sixteen-&-a-half *lignes* high. The stalk is slender, yellowish green, ten *lignes* long, and inserts into the center of a very small indentation. There's no noticeable groove dividing the fruit lengthwise, but a flattening reduces the fruit's diameter by a *ligne*-&-a-half on that side. It's slightly flattened at the top & at the stalk.

Its skin is light purple. It's very adherent to the flesh unless the fruit is very ripe. It has bloom on it & is speckled with very small yellowish-brown spots.

Its flesh is firm and tends to be slightly green in color.

The juice is sweet & pleasant.

The pit doesn't cling to the flesh at all. It's nine *lignes* long, seven-&-a-half *lignes* wide, & four-&-a-half *lignes* thick.

This is an excellent plum though somewhat vulnerable to worms. It ripens toward the end of August.

XIV. *PLUM TREE with late, small, rich purple oblong fruit.*

September DAMSON. Holiday PLUM. (*Pl. VI.*)

This is a vigorous plum tree & it rarely fails to yield a lot of fruit.

Its shoots are very long, of average thickness, reddish, and covered with whitish down.

The buds are small and very pointed. The stems aren't very elevated. This plum tree has single, double, & triple buds.

The flowers are eleven *lignes* in diameter. The petals are racket-shaped.

The leaves are medium-sized, narrow, two inches nine *lignes* long and twenty *lignes* wide. They're finely & not very deeply denticulate. They're wider toward the tip than near the stalk, which is seven or eight *lignes* long.

The fruit is small, slightly oblong, suspended on a slender stalk which is about four or five *lignes* long and set into a narrow & quite deep cavity. One side is divided lengthwise by a groove that's discernible but not very deep. It's thirteen *lignes* long & twelve *lignes* in diameter.

Its skin is delicate, deep purple, covered with bloom and adheres to the flesh.

Its flesh is yellow & crisp. It's quite juicy when the autumn is very warm.

The juice is flavorful. It's pleasant without being tart.

The pit doesn't cling to the flesh. It's eight *lignes* long, five-&-a-half *lignes* wide, and three-&-a-half *lignes* thick. The edge opposite the ridge has a deep furrow as in the late black damson. It terminates in a very sharp point.

This plum ripens around the end of September.

XV. *PLUM TREE with large, round, beautifully purple fruit.*

MONSIEUR. (*Pl. VII.*)

This plum tree is quite large, vigorous, & yields a lot of fruit.

The shoots are big & strong. Their bark is a deep red-brown that borders on purple and is almost completely covered with a white epidermis on the side in the sun. On the shaded side it's speckled with very tiny yellow spots.

The buds are of average size, very pointed and make a very wide angle with the branch. The stems are raised & are very broad.

The flowers open wide. They're eleven *lignes* in diameter. The petals are slightly longer than they are wide. The tips of the stamens are golden yellow.

The leaves are large, elliptical, and a beautiful green. They're three inches four *lignes* long, twenty-five *lignes* wide, finely denticulate on the margins & suspended on stalks fourteen *lignes* long.

The fruit is big, almost round, and well covered with bloom. It's eighteen *lignes* in diameter & sixteen *lignes* long. Its stalk is thick, seven *lignes* long, and inserts into the middle of quite a deep cavity. A groove dividing the fruit in half and usually not very large terminates there.

Its skin is delicate, a beautiful purple, and separates easily from the flesh. Sometimes it splits open & the fruit is only the better for it.

Its flesh is yellow, quite delicate & soft when the fruit is completely ripe.

The juice is a little bland unless this plum tree is planted in warm & loose soil.

The pit is only eight *lignes* long, seven *lignes* wide, and four *lignes* thick. It's slightly rough, flattened at the end corresponding to the top of the fruit & doesn't cling to the flesh at all.

This plum is valued not only for its beauty,

but even more because it ripens early, around the end of July.

XVI. *PLUM TREE with large, roundish, deep purple early fruit.*

Early MONSIEUR. (*Pl. XX. Fig. 1.*)

This plum tree is a variety of the preceding one. It's very similar, even its fruit. The main difference is when the fruit ripens. The early Monsieur ripens around mid-July, about fifteen days before the other one.

The fruit is big, almost round, even though it appears slightly oblong. It's seventeen *lignes* high; its large diameter is seventeen *lignes* & its small diameter is sixteen *lignes*. A not very deep groove runs along one side of it from the top to the stalk. The stalk is slender, four-&-a-half *lignes* long and is set into a narrow & quite deep cavity. At the other end of the fruit there's a small flattening that's very slightly indented.

Its skin is deep purple, covered with much bloom and is very bitter, but it peels off the flesh easily.

Its flesh is soft, yellow verging on green.

The juice is quite plentiful though not very flavorful.

The pit is nine *lignes* long, six *lignes* wide, and four *lignes* thick. It's yellow & slightly rough. It terminates in a blunt point at the end near the fruit's stalk. The remainder is oval.

XVII. *PLUM TREE with large, roundish, flattened, purple to red fruit.*

ROYALE of Tours. (*Pl. XX. Fig. 8.*)

This is a strong & vigorous plum tree. It has lots of flowers & sets fruit very well.

The shoots are short, very thick, greenish brown, reddish at the top and speckled with small gray spots.

The buds are large, numerous, and are not close to the branch. Their stems are very full.

The flowers are thirteen *lignes* in diameter. The petals are slightly longer than they are wide. The tips of the stamens are yellow-brown.

The leaves are three inches, four *lignes* long, two inches, three *lignes* wide, and terminate in an almost similar point at both ends. The denticulation is sharp and quite deep. The stalk is six *lignes* long. The smaller leaves are almost racket-shaped.

The fruit is big and is divided lengthwise by a pronounced though not very deep groove that flattens it at its middle. As a result it's eighteen *lignes* across its large diameter, sixteen *lignes* from the bottom of the groove to the opposite side & eighteen *lignes* high. When looked at on its smaller diameter, it seems to be slightly oblong. Its stalk is quite substantial, a very light green, and it inserts into a small cavity that's narrow & not very deep. The top of the fruit is slightly flattened & even indented.

Its skin is a not very deep purple, covered with a lot of bloom, and scattered with very tiny almost golden-yellow spots. On the shaded side it's more light red than purple.

Its flesh is yellow tending to green, delicate, & very good.

The juice is plentiful, sweet, and more flavorful than that of the Monsieur plum.

Its pit is large, flat, very rough, ten-&-a-half *lignes* long, eight *lignes* wide, and four *lignes* thick.

This plum ripens toward the end of July. It's an extremely good fruit. If it hasn't completely ripened on the tree, or if the tree hasn't been planted in a good exposure, the skin is quite light red & not purple.

XVIII. *PLUM TREE with very large round pale purple fruit.*

Cyprus PLUM.

This plum is very big, almost round, nineteen *lignes* high by nineteen-&-a-half *lignes* in diameter. An almost imperceptible groove divides it lengthwise. It terminates in a small indentation at the top & in another much larger one at the other end where the stalk inserts at the center. The stalk is thick and seven *lignes* long.

Its skin is light purple, covered with bloom, tough, and has a very tart taste. It's extremely difficult to separate it from the flesh.

Its flesh is green and firm.

The juice is quite plentiful & sugary. But it has a tartness & an unpleasant wild taste. However, when the fruit is extremely ripe, its flesh becomes tender, the juice loses its tartness, & then it's quite good.

The pit isn't large in proportion to the fruit. It clings to the flesh only at one or two spots. It's very rough & one of its edges is raised with very prominent ridges.

XIX. *PLUM TREE with late, medium-sized, round, beautiful purple fruit.*

Swiss PLUM. (*Pl. XX. Fig. 7.*)

This is a large and fruitful tree.

Its shoots are slender, deep purple on the side toward the sun,

light purple and covered with very fine golden yellow bloom on the shaded side. The thick part of the shoot is greenish mixed with light gray.

The buds are stout, short, pointed, and situated next to one another, making almost a right angle with the branch. Their stems are thick & prominent.

The flowers are about eleven or twelve *lignes* in diameter. They're usually solitary. The petals are oval-oblong.

The leaves are oval, twenty *lignes* long and fifteen *lignes* wide. Their denticulation is barely discernible. They're concave like a boat & they often shrivel up in different ways. The stalk is thick and five to eight *lignes* long.

The fruit is medium-sized, very round at the middle without any lengthwise groove or flattening dividing it lengthwise. Its stalk is seven *lignes* long & inserts into a very small recess. The tip of the fruit is slightly flattened & in its center there's a cavity that's very much wider & almost as deep as the one where the stalk inserts. The fruit is sixteen *lignes* high & sixteen-&-a-half *lignes* in diameter.

Its skin is a beautiful purple. It has a lot of bloom on it, it's very firm, but it peels off easily.

Its flesh is light yellow, tending slightly toward green on the side in the shade.

The juice is plentiful, very sweet, more pleasant & flavorful than the Monsieur plum to which it's usually compared.

The pit adheres to the flesh in several places. It's seven-&-a-half *lignes* long, six *lignes* wide and four *lignes* thick. Its ridge is very broad & the opposite edge is hollowed with a deep groove like the pit of the red Perdrigon plum but the edges are smooth.

This plum ripens at the beginning of September & lasts almost the whole month.

XX. *PLUM TREE with small ovoid green to white fruit, marked with red spots where it faces the sun.*

White PERDRIGON. (*Pl. VIII.*)

This plum tree is liable to abort, so it's best to plant it on espalier.

The shoots are brown, short and thick. They're purple at the tip and covered with a whitish powder or down.

The buds are big and are close to the branch. They have prominent stems.

The flowers are eleven *lignes* in diameter. They're fully open. Two or three emerge from the same bud. The petals are round & flat.

The leaves are two inches ten *lignes* long and nineteen *lignes* wide. They're much narrower near the stalk where they terminate in a sharp point than they are at the other end which terminates in a blunt point. The denticulation is uniform, quite large & quite deep. The stalk is nine *lignes* long.

The fruit is small. It's fifteen-&-a-half *lignes* high & fourteen-&-a-half *lignes* in diameter. It's somewhat longish & its diameter is smaller near the stalk than it is near the tip. The groove dividing it lengthwise is almost undetectable. The stalk is eight *lignes* long, quite slender, and inserts into the bottom of a very small recess.

Its skin is leathery, whitish green speckled with red on the side in the sun and covered with a very white bloom.

Its flesh is slightly greenish white, transparent, delicate, and tender though firm.

The juice has a slight fragrance that's unique. It's so sugary that when the fruit is very ripe it tastes like jam.

The pit is seven *lignes* long, five *lignes* wide,

and three *lignes* thick. It doesn't cling to the flesh at all.

This plum is excellent both fresh & in preserves. It's used to make sun-dried prunes called Brugnolles because they come from a village in Provence of that name.

It ripens at the beginning of September. When this plum tree grows in the right soil, its fruit is big beyond description.

XXI. *PLUM TREE with medium-sized longish fruit turning from beautiful purple to red marked with yellow spots.*

Purple PERDRIGON. (*Pl. IX.*)

This tree sets fruit with difficulty when it's out in the open. It prefers an espalier.

The shoots are long & strong. Their bark is deep purple on the side in the sun & red mixed with purple on the opposite side. The thick part of the shoot is yellow-green.

The buds are large, pointed and set apart from the branch. Often there are double & even triple buds near the end of the shoot. Their stems are moderately raised.

The flowers are eleven *lignes* in diameter. Their petals are round & the tips of the stamens are a very pale yellow.

The leaves are four inches long and two inches wide. They're narrower than those of most other plum trees. They're uniformly but not very deeply denticulate & bidenticulate. They're much wider at the tip than at the stalk, where they terminate in a uniform point. Their stalk is ten to twelve *lignes* long.

The fruit is medium-sized and slightly oblong. It's seventeen *lignes* long by sixteen-&-a-half *lignes* in diameter. The stalk of the fruit is nine *lignes* long and is set into the bottom of a small but deep cavity. The groove is not very distinct,

but the side down which it runs is slightly flattened, so the diameter measured from this side is only fifteen-&-a-half *lignes* at most. It's more enlarged at the top than it is at the stalk.

Its skin is leathery, a beautiful purple verging on red, dusted with a white & somewhat silvery bloom and speckled with very tiny golden yellow spots.

Its flesh is light green, delicate & fine.

The juice is very sweet, very flavorful & has a characteristic fragrance.

The pit clings to the flesh. It's eight-&-a-half *lignes* long, six *lignes* wide, and three-&-a-half *lignes* thick.

This plum is a variety of the preceding one. It's hardly different from it except in color & the adherence of its pit. It ripens around the end of August.

XXII. *PLUM TREE with small, ovoid beautifully red fruit speckled with tan spots.*

Red PERDRIGON. (*Pl. XX. Fig. 6.*)

This plum tree is more fruitful & less inclined to abort than the other Perdrigons.

The shoots are brown, slender, and very elongated. Their tips are dark red on the side facing the sun & bright red on the opposite side.

The buds are small and very pointed. They lie against the branch. Their stems aren't very raised.

Two or three flowers emerge from the same bud. They're an inch in diameter. The petals are oval and flat.

The leaves are of average size, elliptical in shape, and a bit wider near the stalk than at the other end where they terminate in a sharp point. They're uniformly, finely, & quite deeply denticulate. They're three inches long

& two inches wide. Their stalk is about five or six *lignes* long.

The fruit is small and oval-shaped like the white Perdrigon. It's well-rounded at the middle and has no groove and almost no flattening. The stalk is nine *lignes* long and is set in a very small indentation. It's slightly more blunt or flattened at the top than at the other end. It's fifteen-&-a-half *lignes* high & fourteen-&-a-half *lignes* in diameter. It grows bigger in favorable soil.

Its skin is a beautiful red that tends to be slightly purple and is speckled with very tiny tan spots. It has a lot of bloom on it.

Its flesh is light yellow on the side in the sun and verges on green on the shaded side. It's firm & delicate.

The juice is plentiful, very sweet & flavorful.

The pit is nine *lignes* long, five-&-a-half *lignes* wide, and three-&-a-half *lignes* thick. It separates easily from the flesh. The edge opposite the ridge has an open & very deep groove.

This plum is later than the two preceding ones. It ripens in September. It's an excellent fruit.

XXIII. *PLUM TREE with medium-sized, oblong, deep to pale purple fruit speckled with tan spots.*

Normandy PERDRIGON.

This plum tree, almost unknown in the vicinity of Paris, is large & vigorous. Its wood is substantial & extremely brittle.

The leaves are large, thick, and a beautiful green.

The flowers are beautiful & are not likely to abort.

The fruit is big, slightly oblong, and more enlarged near the stalk than at the top. In rare instances it's divided lengthwise by a noticeable groove but usually only by a flattening.

Its stalk is quite thick, four to six *lignes* long and inserts into a narrow, round, and not very deep cavity. Its top is slightly flattened. It's seventeen *lignes* long, the same across its large diameter, and sixteen *lignes* across its short diameter. If it survives the rainy weather while it's ripening, it splits open without any loss in quality.

Its skin has a lot of bloom on it and is speckled with tawny spots. The side in the sun is dark purple bordering on black. The other side is a mixture of light purple & yellow. It's leathery but it easily separates from the flesh & it has no tartness, acidity, or bitterness.

Its flesh is very light yellow, firm, tender, & delicate.

The juice is plentiful, sweet and flavorful.

The pit clings to the flesh at several places unless the fruit is very ripe. It's oval, flattened, practically smooth, eight-&-a-half *lignes* long, six-&-a-half *lignes* wide, and three-&-a-half *lignes* thick.

This plum, which can be numbered among the best, ripens after the middle of August. The tree is very fruitful & doesn't need to be put on espalier.

XXIV. *PLUM TREE with large, roundish-flattened pale purple fruit.*

ROYALE. (*Pl. X.*)

This plum tree grows into a large tree.

The shoots are vigorous, thick and long. The bark is purple with ash-colored spots. Most often it's flax-gray on the sun side & gray-green on the shaded side.

The buds are small, very sharp, & don't lie close to the branch.

The flowers are beautiful, thirteen *lignes* in diameter. The petals are six *lignes* long, five *lignes* wide, and slightly concave like a spoon.

The leaves are very green and are folded along the central vein. They're three inches long and two inches wide. If they terminated in a point at the tip in the same way that they do at the stalk, they would be lozenge-shaped or rhomboidal. The denticulation on the margins is large, rounded & not at all deep. The stalk is six to eight *lignes* long.

The fruit is big and almost round. It's seventeen-&-a-half *lignes* in diameter & seventeen *lignes* long. It's divided lengthwise by a groove that's barely discernible, & it's slightly flattened on that side. As a result the diameter measured from the groove to the opposite side is only sixteen *lignes*. Its convexity is more flattened near the top than at the end near the stalk when viewed along its large diameter. The stalk, twelve *lignes* long, is green, quite full, covered with light down and is set into a small recess.

Its skin is light purple & covered with so much bloom that it looks kind of ashy. It's speckled with very small tan spots.

Its flesh is transparent & light green. It's firm & quite delicate.

The juice is very flavorful & is similar to that of the Perdrigon.

The pit doesn't cling to the flesh at all. It's eight *lignes* long, six *lignes* wide, & four *lignes* thick.

This plum ripens in mid-August.

XXV. *PLUM TREE with large very slightly flattened green fruit with ash-gray marks & speckled with red.*

DAUPHINE. Large GREENGAGE. Green APRICOT plum. VERTE-BONNE. (*Pl. XI.*)

This is quite a vigorous tree & it fills out well.

The shoots are strong & very stout. Their bark is brown

& smooth. They're usually reddish near the tip on the side toward the sun & green on the opposite side.

The buds are of average size & are not far apart from one another, but their stems are very thick & prominent.

The flowers are an inch in diameter. The petals are oval. Two pedicels often are fused together along their whole, or almost their whole length, which makes them look very much like they were twin flowers.

The leaves are large, wide, & a shiny dark green. Those on the shoots are up to five inches three *lignes* long by two inches nine *lignes* wide. The ones on the fruiting branches are much smaller. The margins are denticulate & bidenticulate. The denticulation is large, uniform, quite deep, and rounded. The stalk is thick and about six or seven *lignes* long.

The fruit is big, round, and slightly flattened at both ends. It's eighteen *lignes* in diameter by sixteen *lignes* high. The stalk, of average thickness, inserts into the center of a quite deep cavity. A not very discernible groove divides the fruit lengthwise. The fruit is flatter on the side with the groove, so the diameter measured from that side is only sixteen *lignes*. The larger fruits are about a *ligne* more in each dimension. If the weather is rainy when the fruit is ripening, it will split open & it improves as a result.

Its skin adheres to the flesh. It's green, delicate, marked with gray spots & struck with red on the side facing the sun. It's covered with a very light bloom.

Its flesh is yellowish green, very fine, tender & delicate without being mushy.

The juice is plentiful, sweet, & has an excellent flavor.

The pit clings to the flesh along its ridge & at a two or three *ligne* spot on each of its flat sides.

It's eight *lignes* long, six-&-a-half *lignes* wide, and four *lignes* thick.

This plum ripens in August. It's unquestionably the best of all of the plums for eating fresh. It makes very good compotes & extremely fine preserves. The prunes have very good flavor but little body.

XXVI. *PLUM TREE with medium-sized, rounded-flattened green to white fruit.*

Small GREENGAGE.

This plum tree yields a lot of flowers & fruit.

Its shoots are smaller than those of the Dauphine. The bark is dark reddish on the side in the sun, green on the side in the shade, and covered with whitish down.

The buds are long, very pointed and almost lie flat against the branch. Their stems are thick.

The flowers are eleven *lignes* in diameter. The petals are a little longer than they are wide & are concave like a spoon. The tips of the stamens are very big.

The leaves are a shiny green, slightly mealy underneath and smaller than those of the Dauphine.

The fruit is medium-sized, round, flattened, especially at the end near the stalk, & divided lengthwise by a groove that's deeper than the one on the large greengage. It's sixteen *lignes* in diameter & fifteen *lignes* high. The stalk is six-&-a-half *lignes* long and is inserted into the middle of a quite deep cavity.

Its skin is leathery, green tending to white and substantially covered with very white bloom.

Its flesh is white, firm, slightly dry and occasionally mealy. Sometimes it's quite soft but a little coarse.

The juice is sweet but not as flavorful as that of the Dauphine; it's often even slightly tart.

The pit doesn't cling to the flesh. It's eight *lignes* long, six *lignes* wide and three *lignes* thick.

This plum ripens at the beginning of September. Although much inferior to the preceding one, it still can be ranked among the best plums.

XXVII. *PLUM TREE with semi-double flowers.*

PLUM TREE with semi-double flowers. (*Pl. XII.)*

This plum tree is a variety of the Dauphine. It's just as vigorous but it yields much less fruit.

The shoots are big & strong. They're deep purple on the side in the sun and light purple mixed with green on the opposite side.

The buds are quite big, pointed and are close to the branch. Their stems are big & prominent.

The flower is an inch in diameter. It's semi-double and has twelve to eighteen petals. The five or six outer ones are almost round, about five *lignes* in each dimension, flat & not wrinkled at the margins. The inner ones are smaller & vary in size. The calyx is green both inside & out which makes the center of the flower appear green. The pistil is large. The stamens rest against the petals.

The leaves are bright green and quite large. They're three-&-a-half inches long and two inches three *lignes* wide. They're much less wide at the end near the stalk than they are at the other end. The denticulation is quite delicate, uniform, rounded, & not very deep.

The fruit isn't as big as that of the Dauphine. It's often even much smaller than the small greengage

and has the same shape. Consequently in many areas it's only fourteen *lignes* in diameter & thirteen high. Its groove is no deeper than that on the Dauphine. Its stalk inserts into quite a wide & deep cavity.

Its skin is green. It often turns yellow when the fruit ripens.

Its flesh is coarser than that of the small greengage and yellow when the skin turns that color.

The juice is average in quality. It becomes quite tasteless when the fruit is extremely ripe.

The pit clings to the flesh.

This plum tree deserves to be grown more for its flowers than for its fruit, which ripens at the same time as the Dauphine.

The fruit of the semi-double flowered plum tree that we grow at Denainvilliers is big. It's flattened at the end where its stalk, about three or four *lignes* long, inserts into a wide & very deep cavity. The top end is much smaller than the one near the stalk. The diameter of this fruit is nineteen *lignes* & its height is eighteen *lignes*. Its groove is well marked & sometimes quite deep. The juice is very plentiful & pleasant though not that flavorful. So if this plum tree were more productive, it would be well worth cultivating for its fruit.

The leaves are small & almost round.

XXVIII. *PLUM TREE with large, rounded-flattened fruit, whitish-green on one side to somewhat red on the other.*

ABRICOTÉE. (*Pl. XIII.*)

This tree grows large.

Its shoots are stout, long & vigorous. They're brown and covered with whitish down. The tips are dark purple on the side facing the sun and green on the side in the shade.

The buds are medium-sized, spaced not far apart from one another and seem to adhere to the branch. Their stems are broad, grooved, & quite elevated.

The flowers are thirteen *lignes* in diameter. The petals are longer than they are wide and almost oval.

The leaves are shiny green, three inches four *lignes* long, seventeen *lignes* wide, and much narrower & more pointed toward the stalk than they are at the other end. Their denticulation is fine, even, sharp, and not very deep. Their stalk is seven *lignes* long. The leaves on the shoots are shaped like short rackets twenty-five *lignes* long by twenty *lignes* wide at the end opposite the stalk. Their denticulation is barely discernible.

The fruit is bigger & more elongated than the small greengage, which it resembles a great deal. It's eighteen *lignes* in diameter & it's sixteen-&-a-half *lignes* long. Its stalk is short and is set almost flush with the fruit or in a very small indentation. The groove dividing it lengthwise along one side is deep & wide, especially at the top end where it terminates in a small indentation.

Its skin is tart, leathery, whitish green on the side in the shade and marked with red on the side toward the sun.

Its flesh is yellow and firm.

The juice is musky, quite pleasant & plentiful when the fruit is fully ripe. But it almost always retains a bit of a wild taste.

The pit doesn't cling to the flesh at all. It's seven-&-a-half *lignes* long, six-&-a-half *lignes* wide, and three-&-a-half *lignes* thick.

This plum ripens at the beginning of September. It's an extremely good fruit, almost comparable to the greengage.

The apricot plum is longer than the Abricotée.

Its skin is yellow, speckled with red. Its flesh is yellower & drier.

XXIX. *PLUM TREE with small (indeed the smallest) rounded oblong amber-colored fruit.*
PLUM TREE with small green to yellow fruit. Inst.

MIRABELLE (*Pl. XIV.*)

This plum tree never grows to more than average height. But it's very bushy & yields lots of fruit in clusters.

The shoots are slender, red-purple at the tip and light gray elsewhere.

The buds are quite big and are set close to one another. They make a very wide angle with the branch. Their stems are prominent.

The flowers are abundant. Two or three of them emerge from the same bud. They're nine *lignes* in diameter; their petals are oval.

The leaves are small, oval, very oblong, quite a deep green and finely denticulate on the margins. They're twenty-eight *lignes* long, fourteen *lignes* wide, and are attached by stalks that are quite slender & nine *lignes* long.

The fruit is small, round, slightly oblong, thirteen *lignes* long & twelve *lignes* in diameter. There's no detectable groove dividing it lengthwise. The stalk, seven *lignes* long, is set flush with the fruit or in a very small indentation.

Its skin is a bit leathery, yellow, turning an amber color when the fruit is completely ripe & speckled with red when struck by sunlight.

Its flesh is yellow, firm, & a little dry. However it gets juicier when the fruit is allowed to ripen completely.

The juice is extremely sweet.

The pit is small, soft, & doesn't cling to the flesh at all. It's six *lignes* long, four-&-a-half *lignes* wide, and three *lignes* thick.

This plum ripens around mid-August. It's quite good when fresh, but it's mainly valued for its preserves & for its compotes because it acquires a very pleasant fragrance when sugared. In addition it makes fine prunes.

The small Mirabelle has the same shape. It's a bit yellower, drier, ripens earlier & is not as large. It's only ten-&-a-half *lignes* long by nine-&-a-half *lignes* in diameter.

XXX. *PLUM TREE with small round yellow fruit speckled with red spots.*

CLOTH OF GOLD. Double MIRABELLE.

The shoots are short, quite stout, green-brown on the side in the sun and green on the side in the shade. The tip is deep purple on the side in the sun and a golden color on the opposite side.

The buds are small, pointed, and lie against the branch. Their stems are very prominent.

The flowers are eleven *lignes* in diameter. Their petals are long & narrow.

The leaves are oval, three inches long, two inches three *lignes* wide, a somewhat pale green, denticulate on the margins and suspended on petioles eight *lignes* long.

The fruit is small, almost round, and shaped like a small greengage. It's twelve *lignes* long & thirteen *lignes* in diameter. The groove dividing it lengthwise is almost imperceptible. Its stalk is slender, six *lignes* long, and inserts into the bottom of a small recess.

Its skin is delicate, yellow, and spotted with red on the side in the sun.

Its flesh is yellow, tender, & very delicate.

The juice is extremely sweet & has a very fine flavor.

The pit is small, six *lignes* long, five *lignes* wide, and four *lignes* thick. It doesn't cling to the flesh, although it doesn't separate from it cleanly.

This plum, which appears to be sort of transparent, ripens around the twelfth of August.

I think Merlet was right to rank the Cloth of Gold & the mirabelle with the damson plum.

XXXI. *PLUM TREE with small more elongated green to yellow fruit pointed at both ends.*

BRICETTE. (*Pl. XX. Fig. 5.*)

This is a small plum that's fifteen *lignes* high & twelve-&-a-half *lignes* in diameter. It terminates in a point at both ends, but it's more oblong at the top than it is near the stalk. There's no detectable groove on it, only the side where it would normally run lengthwise is slightly flattened. The stalk, quite a full one and eight-&-a-half *lignes* long, is set almost flush with the fruit on a small flattening rather than into a recess. Its skin is green-yellow, quite covered with bloom, which makes it appear white. The skin is firm but it peels off the flesh when the fruit is fully ripe. The flesh is firm and tends to be yellow. The juice is quite plentiful and slightly tart. The pit is eight *lignes* long, five-&-a-half *lignes* wide, and three-&-a-half *lignes* thick. It doesn't cling to the flesh at all. This plum lasts a long time. In some years the first ones ripen at the beginning of September & the last ones at the end of October.

XXXII. *PLUM TREE with large, oval light purple fruit.*

Purple IMPÉRIALE. (*Pl. XV.*)

This is a very vigorous tree.
The shoots are long & stout, red-brown and speckled with very tiny gray spots. The tip tends to be light purple.

The buds are big, pointed, and quite separated from the branch. Their stems aren't very raised.

The flowers are an inch in diameter. The petals are round; the style of the pistil is very long. The flowers often have six, seven, or eight petals; in that case some are round and others are oblong.

The leaves are three inches long and two inches wide; their denticulation is large, regular, and not very deep. The leaves are elliptical in shape and are similarly pointed at both ends. Their stalk is eight or nine *lignes* long.

The fruit is big, long, oval, and slightly more enlarged at the tip than at the end near the stalk. It's about nineteen or twenty *lignes* long & about fifteen or sixteen *lignes* in diameter. It hangs on a stalk about nine or ten *lignes* long that's quite slender and inserts into the middle of a small and quite deep cavity. The groove that divides it lengthwise usually is very discernible.

Its skin is a bit leathery, light purple, covered with a lot of bloom, and is difficult to separate from the flesh.

Its flesh is firm & a little dry, whitish green & transparent.

The juice is sweet & flavorful.

Its pit is pointed, ten *lignes* long, six *lignes* wide, and four *lignes* thick. It doesn't cling to the flesh at all.

This plum ripens about the twentieth of August. It's prone to infestation by worms.

XXXIII. *PLUM TREE with white leaves that are variegated.*

Purple IMPÉRIALE with variegated leaves.

This plum tree is a variety of the preceding one.
The shoots are big & strong for a variegated tree. They're a beautiful purple on the side in the sun, variegated green & white on the side in the shade, and grooved below the buds.

The buds are triple along the whole length of the shoot. Their stems are big & prominent.

The leaves are small, only two inches long by sixteen *lignes* wide. They terminate in a sharp point. They're evenly, deeply, & quite finely denticulate. The inner side is variegated & a sort of grainy white & green. The outer side is almost all white. The stalks, about four or five *lignes* long, are purple on one side & green-white on the other.

The fruit usually is misshapen, in poor condition & seemingly aborted. It's a very light purple with little bloom on it and is attached to a slender stalk six *lignes* long. So this tree is better suited to an ornamental garden than to an orchard.

There's another Impériale with very big & very oblong fruit. The fruit is two inches long by eighteen *lignes* in diameter. It's olive-shaped, a little more pointed at the end near the stalk than it is at the tip. Its groove is almost undetectable. The stalk is set almost flush with the fruit.

Its skin is leathery but it peels off the flesh easily.

Its flesh is slightly yellowish, transparent, & softer than that of the preceding one.

The juice is sweet & pleasant, although it retains a little tartness even when the fruit is extremely ripe.

The pit separates completely from the flesh. It's rough, extremely long, pointed & flat. It's only six-&-a-half *lignes* wide

& three *lignes* thick by fourteen *lignes* long.

This plum, which is very beautiful, ripens a bit earlier than the preceding one.

XXXIV. *PLUM TREE with large, longer pale purple fruit.*

JACINTHE. (*Pl. XVI.*)

This is a vigorous tree.

The shoots are medium-sized, long & straight and reddish at the tip. The rest is sort of mottled with various colors: whites, greens, yellows, &c.

The buds are small, short, and rest against the branch. Their stems are prominent.

The flowers are medium-sized and very abundant. Often six or seven emerge from the same node. The petals are oval.

The leaves are three inches three *lignes* long, two inches wide, and slightly less wide toward the stalk than at the other end. The denticulation on the margins is rounded & not very deep. The stalk is six *lignes* long.

The fruit is big, oblong, twenty *lignes* high by seventeen *lignes* in diameter and a little more enlarged at the end near the stalk than at the end near the tip. When there's a big difference in the enlargement, which is infrequent, it gives the fruit almost a heart shape. The fruit is divided lengthwise by a not very discernible groove that usually terminates at the top in a small indentation. The stalk is green, short, quite full, and is attached to the bottom of a narrow but quite deep cavity.

Its skin is light purple and covered with bloom. It's rather thick & firm and is difficult to separate from the flesh.

Its flesh is yellow, firm, and not as dry as that of the Impériale.

The juice is quite flavorful and slightly tart.

The pit is nine-&-a-half *lignes* long, six *lignes* wide, & four *lignes* thick. It adheres to the flesh only at a few spots on its side.

This plum, which is very similar to the Impériale, ripens toward the end of August and in warm & loose soil around mid-August.

XXXV. *PLUM TREE with the largest possible oval white fruit.*

White IMPÉRIALE.

This plum tree yields little fruit & is hardly worth cultivating. It's very vigorous. The shoots are whitish, big & strong. The flowers are very big; the leaves are large & long.

The fruit is very big, oval, with the shape & almost the size of a turkey's egg. Its skin is white and leathery and adheres to the flesh, which is white, firm, & dry. The juice is sour & unpleasant. The pit is long, pointed, & doesn't separate from the flesh at all.

This fruit, which I believe is the same as the large date plum, has no value other than its size & attractive shape. It's worthless either fresh or as a prune. It can be made into fine compotes with lots of sugar.

XXXVI. *PLUM TREE with medium-sized, longer pale purple fruit.*

Purple VARIEGATED PLUM. (*Pl. XVII.*)

This tree yields a lot of fruit.

The shoots are stout, of average length, light gray, and covered with a very thick whitish down.

The buds are big, tripled or quadrupled like those on the apricot tree. Their stems are very prominent.

The flowers are an inch in diameter. Their petals are oval.

Frequently the tips of some of the stamens open up a little. I don't know of any other plum tree that blooms so abundantly.

The leaves are three-&-a-half inches long and two inches seven *lignes* wide. They terminate in a point near the stalk; their widest part is at the other end. They're quite a beautiful green and finely & not very deeply denticulate. They shrivel & fold up in different directions. The ones on the fruiting branches are much smaller; they're barely two inches by thirteen or fourteen *lignes*.

The fruit is medium-sized, oblong, eighteen *lignes* long by fourteen *lignes* in diameter; it's a little more enlarged at the end near the stalk than at the tip. The groove that runs along it lengthwise is barely discernible. It's suspended on a slender stalk, six *lignes* long at most and set almost flush with the fruit.

Its skin is thin, purple, covered with a lot of bloom, and separates easily from the flesh.

The flesh is firm, delicate, and yellow bordering on green.

The juice is sweet & pleasant.

The pit is very elongated it and separates easily from the flesh. It's ten *lignes* long, five *lignes* wide, three-&-a-half *lignes* thick and terminates in a very sharp point.

This plum ripens at the beginning of August. It's very plump, good when fresh & excellent as a prune.

XXXVII. *PLUM TREE with medium-sized, longer cherry-colored fruit darkened with spots [fix].*

Red VARIEGATED PLUM. ROCHE-CORBON. (*Pl. XX. Fig. 12.*)

This tree is vigorous & beautiful. It blooms profusely.

The shoots are thick, long, well-rounded, and covered with a fine, velvety, palpable light gray down that conceals

a brown-purple color on the side in the sun & a yellowish one on the shaded side.

The buds are small, wide at their base, and lie against the branch. Their stems are raised.

The flowers are eleven *lignes* in diameter. Two or three emerge from the same bud. The petals are almost round and slightly concave like a spoon. The tips of the stamens are golden-yellow.

The leaves are small, almost round, a little less wide toward the stalk than they are at the other end. Their denticulation isn't very deep & forms only a small arc. The leaves are sixteen *lignes* long & fourteen *lignes* wide. The stalk is six *lignes* long.

The fruit is medium-sized and long. It's eighteen *lignes* high & fourteen-&-a-half *lignes* in diameter. It's usually flattened at the middle so it's only twelve and two thirds *lignes* in diameter at the flattened part. The flattening is apparent on both sides & greater toward the top than at the stalk. There's no groove at all but merely a line that extends from the top to the stalk & runs along one side of the large diameter & not on one of the flattened sides. The stalk, four *lignes* long, inserts into a not very deep cavity.

Its skin is cherry-red and abundantly speckled with brown spots, which dulls its color. It peels off easily.

Its flesh is yellow, thin, & firm.

The juice is quite plentiful, flavorful & very sweet.

The pit is ten *lignes* long, five-&-a-half *lignes* wide, and three *lignes* thick. It doesn't cling to the flesh at all.

This plum ripens at the beginning of September.

XXXVIII. *PLUM TREE with small oval-oblong green to white fruit.*

White VARIEGATED PLUM. (*Pl. XX. Fig. 11.*)

The shoots of this plum tree are thick & long, well-rounded, dark purple on the side in the sun & almost lilac on the opposite side.

The buds are small, very pointed, and rest against the branch. Their stems are big & wide.

The flowers are ten *lignes* in diameter. Their petals are four-&-a-half *lignes* long & three *lignes* wide. Some have six & others have seven petals; generally one of them is only a tip of a stamen that's a little open.

The leaves are long, narrow, and come to a point at both ends. The point is considerably more elongated at the stalk, which is slender and eleven *lignes* long. The margins of the leaves aren't very deeply denticulate. The leaves are three inches two *lignes* long & thirteen *lignes* wide.

The fruit is small, oval-oblong in shape. It's fifteen *lignes* long & ten-&-a-half *lignes* in diameter. It's round around the middle and has no groove or flattening but only a green line that runs from the tip to the stalk. Its stalk is about four or five *lignes* long & is set flush with the fruit.

Its skin is a green, almost white, and is covered with white bloom. It's firm and bitter, but it peels off the flesh quite easily.

The flesh is firm and very light yellow.

The juice is very sweet, flavorful & very fine when the tree is planted on espalier.

The pit is nine-&-a-half *lignes* long, four *lignes* wide, and two-&-a-half *lignes* thick.

This plum ripens at the beginning of September; it ripens earlier on espalier.

XXXIX. *PLUM TREE with medium-sized more elongated beautifully purple late fruit pointed at both ends.*

Purple IMPÉRATRICE. (*Pl. XVIII.*)

This plum tree somewhat resembles the Perdrigon plum tree.

The shoots are of average strength. Their bark is reddish.

The buds are big, pointed, not very far from one another and close to the branch. Many of them are double or triple. Their stems are big & wide.

The flowers are small & are fully open. Their petals are oval.

The leaves are of average size, two inches ten *lignes* long and twenty *lignes* wide. Their widest point is near the middle; the two ends terminate in a point. The denticulation is large & deep. The stalk is six *lignes* long. The veins are covered with thick down.

The fruit is medium-sized, long, and pointed at both ends. The contour is often irregular along one side. The stalk is quite full, about six or seven *lignes* long, and is inserted almost flush with the fruit. There's no discernible groove at all. The fruit is eighteen *lignes* long & thirteen-&-a-half *lignes* in diameter.

Its skin is a beautiful purple, covered with a lot of bloom, and somewhat hard.

Its flesh is firm & delicate. It tends to be yellow on the side exposed to the sun & green on the other side.

The juice is quite sweet for a late plum.

The pit is ten *lignes* long, five *lignes* wide, and three *lignes* thick.

This plum ripens in October & it would be commendable even in a shorter season. I believe it should be thought of as a late Perdrigon rather than as an Impératrice. The true purple Impératrice is almost round, purple, and covered with a lot of bloom. It ripens as late as the princess plum with which some confuse it. It's slightly inferior in quality and quite similar in shape to the one that follows.

XL. *PLUM TREE with medium-sized oblong-flattened yellow fruit.*

White IMPÉRATRICE. (*Pl. XVIII. Fig. 2.*)

This is a medium-sized plum, slightly oblong. It's divided lengthwise by a not very distinct groove that runs from the tip, where it terminates in a small indentation, up to the stalk, which is two *lignes* long & inserts into a very narrow but deep cavity. The large diameter is fifteen-&-a-half *lignes*, the small diameter (because the side with the groove is flattened) is fourteen and a third *lignes*, and it's sixteen-&-a-half *lignes* long. The skin is light yellow and full of bloom, which makes it appear white. The flesh is firm, yellow, and somewhat transparent. The juice is pleasant & sweet. The pit is eight-&-a-half *lignes* long, four-&-a-half *lignes* wide, and three *lignes* thick. It separates completely from the flesh. In warm & dry years the fruit begins to ripen around the end of August. This plum is very plump & delicious; sometimes it's a little mealy.

XLI. *PLUM TREE with the largest possible oval yellow fruit.*

DAME-AUBERT. GROSSE-LUISANTE. (*Pl. XX. Fig. 10.*)

This is a very big plum with a very uniform oval shape. It's twenty-six *lignes* high & its diameter is twenty-one-&-a-half *lignes*. It's divided lengthwise by a wide & not very deep groove. Its stalk, quite a thick one, is straight and seven or eight *lignes* long. It's set into a narrow & deep cavity at the bottom of which there's usually a small swelling that holds the stalk without sticking to it. Its skin is yellow on the side facing the sun, turning green on the opposite side and covered with very white bloom. It's thick & leathery but it separates easily from the flesh. The flesh is yellow & coarse. The juice is sweet but tasteless when the fruit is very ripe. Consequently this plum is satisfactory only for compotes, as long as it's not allowed to get overripe. The pit is fifteen *lignes* long, eight *lignes* wide, and six *lignes* thick. It ripens around the beginning of September.

XLII. *PLUM TREE with large very long green fruit.*

ISLE-VERTE. ILEVERT. (*Pl. XX. Fig. 9.*)

This plum tree does not grow big.

The shoots are slender & longish, gray-white with a reddish tip verging on purple.

The buds aren't very far apart from each other. They're rounded, not very pointed, and not close to the branch. Their stems are small & projecting.

The flowers are eleven *lignes* in diameter. The petals are long, narrow, & slightly concave like a spoon.

The leaves are oblong, wide at the tip and terminate in a point at the stalk, which is green, almost white, and six *lignes*

to an inch long. The leaves are two inches nine *lignes* long by twelve or thirteen *lignes* wide. Their denticulation is sharp, quite large & deep.

The fruit is big, very long, and frequently not well formed. Sometimes it's somewhat pear-shaped, enlarged at the top, & compact at the end near the stalk, which is quite long & slender. Sometimes it's curved like a gherkin or irregularly distorted. When it's well formed it comes to slightly more of a point at the stalk than at the top. Its greatest diameter is approximately half way along its length. There's no groove at all, but in the middle of a flattening extending from the top to the stalk a darker green line is visible. This side of the fruit is more convex along its length than is the opposite side. The fruit is twenty-three *lignes* long & fourteen *lignes* in diameter. Its stalk is eight *lignes* long.

Its skin is sour, leathery, green with light bloom, and sort of transparent.

Its flesh is green, coarse, and mushy.

The juice is a little tart, nevertheless sugary, but it has an unpleasant wild taste.

The pit is very long, pointed, and clings to the flesh. It's fourteen *lignes* long, five *lignes* wide, and three *lignes* thick.

This plum ripens at the beginning of September. It's only good for compotes & in preserves. Greengages & Perdrigons are far preferable to it for these purposes.

XLIII. *PLUM TREE with medium-sized oblong waxen fruit.*

PLUM TREE with wax-colored fruit. Inst.

SAINTE-CATHERINE. (*Pl. XIX.*)

This tree is vigorous & yields a lot of fruit.

The shoots are long, thick, well-rounded, light brown bordering on purple, and speckled with very tiny gray spots.

The buds are medium-sized, pointed, and not close to the branch. Their stems are quite elevated.

The flowers are eleven *lignes* in diameter. The petals are oval-shaped, flattened on the sides. The tips of the stamens are dark yellow.

The leaves are three inches six *lignes* long and twenty-one *lignes* wide. They're widest at the center, & the two ends both come to a point. Their denticulation is fine & deep. The stalk is nine *lignes* long.

The fruit is medium-sized, oblong, fifteen-&-a-half *lignes* in diameter & seventeen *lignes* long. It's slightly more enlarged at the tip than at the stalk, which is slender, nine *lignes* long and inserts into a narrow cavity. It's divided lengthwise by a groove that's wide & quite deep near the stalk & at the tip where it terminates at a small flattening.

Its skin is green verging on yellow and well covered with bloom. It turns amber when the fruit is completely ripe & is even spotted with red when the tree is on espalier. It's always slightly leathery & adheres to the flesh.

Its flesh is yellow, soft & delicate when the fruit is fully ripe.

The juice is then very sweet & has excellent flavor.

The pit is eight-&-a-half *lignes* long, five-&-a-half *lignes* wide, and three-&-a-half *lignes* thick. It doesn't cling to the flesh at all.

This plum is delicious fresh & in preserves. It ripens around mid-September. It's somewhat vulnerable to worm infestation.

XLIV. *PLUM TREE with very small blackish fruit without a pit.*

PLUM TREE with fruit lacking a pit and equipped with an osseous circular segment. Act. Ac. R. P.

SEEDLESS PLUM. (*Pl. XX. Fig. 14.*)

The shoots of this plum tree are blackish or deep purple. The flowers are ten *lignes* in diameter & their petals are round & very concave spoonlike. The leaves are oblong, finely denticulate on the margins, green-brown above & pale green underneath, and they come to a sharp point. They're two-&-a-half inches long and eighteen *lignes* wide. They're widest near their center.

The fruit is small and olive-shaped. It's a bit smaller at the tip than at the end near the stalk; the stalk is about five or six *lignes* long. The fruit is eight-&-a-half *lignes* long & seven-&-a-half *lignes* in diameter. Its black or dark purple skin is covered with bloom. Its flesh is yellow, tending toward green. The juice is sour, & when the fruit becomes extremely ripe the sourness is lost and it becomes tasteless. The kernel is big, well shaped, and bitter. There's no pit around it and doesn't cling to the flesh at all. Frequently there's a woody strip in a sort of semicircle, like the rim of an eyeglass, around it.

This plum ripens at the end of August & is merely a curiosity.

XLV. *PLUM TREE from Virginia with large, longish almost cherry-colored fruit.*

Virginia PLUM TREE.

This tree, brought to us from the Virginia coast, grows to an average size & yields little fruit. It's very bushy & its shoots are quite long. The leaves are oblong & wider at the tip than near the stalk. The flowers are small, white, & there are so many of them that the tree seems to be completely white when it's in bloom.

The fruit is quite big, longish, and suspended on a long stalk that's set flush with the fruit. Its skin is red, almost like a cherry. Its flesh is very white, firm, & a little dry. The juice has a not very pleasant acidity. The pit doesn't cling to the flesh.

This tree deserves to be in an ornamental garden because of its flowers rather than in an orchard for its fruit.

XLVI. *PLUM TREE with medium-sized round fruit with the shape & color of a cherry.*

MIRABOLAN. (*Pl. XX. Fig.* 15.)

This tree grows large & very bushy.

The shoots are slender, a light red-brown, and full of buds. Normally each node has one wood bud situated between two fruit buds. The fruiting branches are short and terminate in a group of eight or nine buds.

The buds are very small & pointed.

The flowers are eleven *lignes* in diameter. They have five, six, seven, or eight petals. Those with more than six petals have two pistils. The indentations in the calyx are the same in number as the petals. The petals are white, but as the interior margins of the calyx are lightly tinged with red, the center of the flower appears to be that color. The pedicels are six *lignes* long;

frequently a single pedicel bears two flowers. These twin flowers & those that have several pistils are very numerous & usually abort, so this tree yields little fruit even though it blooms profusely.

The leaves are thin, very small, bright green, very finely & not very deeply denticulate. They're two inches long at most & about ten or eleven *lignes* wide. The stalk is very slender and three or four *lignes* long. The leaves are very apt to be eaten by insects.

The fruit is round and shaped like an amber-colored cherry. It's fourteen *lignes* in diameter by thirteen *lignes* high. It's flattened near the stalk, which is slender, four *lignes* long, & inserts into a cavity that's smooth & not very deep. The top terminates in a small elevation like a budding projection. At its tip there's a dried remnant of the style, like a very tiny point. There's no groove at all dividing this fruit but merely a line only discernible by its color.

Its skin is very firm, smooth, sour, and is a slightly dark cherry color scattered with very tiny whitish spots.

Its flesh, very light yellow & transparent, becomes mushy when the fruit is very ripe.

Initially the juice is very sour and later on becomes quite tasteless.

The pit is slightly rough; it adheres to the flesh in several places and terminates in a sharp point. It's seven-&-a-half *lignes* long, five-&-a-half *lignes* wide, and four *lignes* thick.

This fruit ripens around mid-August, & it's not much good either fresh or stewed. So the Mirabolan tree should be listed as an ornamental tree rather than as a fruit tree.

XLVII. *PLUM TREE with medium-sized oblong fruit, yellow on one side, becoming green on the other.*

DATE PLUM.

The date plum is medium-sized, slightly oblong and has a regular & pleasing shape. It's fifteen-&-a-half *lignes* long, its large diameter is fifteen *lignes,* & its small diameter is fourteen *lignes.* On one side it's divided lengthwise by a groove or rather by a flattening that has almost no depth at all. This terminates at the top in a very small indentation & at the other end in a narrow & quite deep cavity where the stalk inserts. The stalk is quite full & fifteen *lignes* long.

Its skin is beautifully yellow on the side in the sun; it's frequently marked with small very bright red spots. The shaded side tends to be green. It's covered with white bloom, it adheres to the flesh, and is leathery and sour.

Its flesh is yellow and mushy.

The juice usually is tasteless.

The pit is nine-&-a-half *lignes* long, six-&-a-half *lignes* wide, and four *lignes* thick. Its surface is practically smooth.

This plum ripens about the beginning of September.

XLVIII. *PLUM TREE that bears fruit twice a year.*

PLUM TREE that bears fruit twice a year. (*Pl. XX. Fig.* 13.)

The fruit of this plum tree is worth cultivating less for its usefulness than as a curiosity. It's long, almost olive-shaped and slightly more pointed at the tip than at the stalk. It's divided lengthwise by a groove that's not very discernible. It's fourteen *lignes* long & eleven *lignes* in diameter.

Its skin is reddish yellow, transparent, quite speckled with brown spots, covered with bloom and peels off easily from the flesh.

Its flesh is coarse and light yellow except at the groove where it's green.

The juice is quite tasteless when the fruit is fully ripe.

The pit is almost smooth; it terminates in a very sharp point and clings strongly to the flesh. It's nine *lignes* long, four *lignes* wide, and three *lignes* thick.

The first crop of fruit matures about the beginning of August; the second one is extremely late. Both of them are pretty wretched.

CULTIVATION.

1°. Few trees are likely to vary as much from seed planting as are the plum trees. Consequently plum pits are planted only to obtain a new type or variety or to procure stocks for grafting those that are normally cultivated & are worth doing so. For the latter purpose one should not plan to plant seeds of the choice kinds of plums, because nurserymen claim that the stocks that grow from them accept grafts with difficulty & nourish them poorly. But it's better to raise the Saint-Julien, Cerisette and the large & small black damsons, on which all types of plum trees are successfully grafted, from seeds rather than from shoots & rooted suckers. The first of the above is preferable to the others. The small black damson is a little too weak for some of the vigorous kinds of grafts; the graft covers it with a large swelling, an indication of unequal strength on either side.

Excellent kinds of plums, the Dauphine, the Perdrigon, &c. also are grafted on apricot & even on young peach trees raised from seeds. This especially applies to those that are intended to be grown on espalier

or in a location where one is concerned about the problem of roots of plum trees, not grown from seeds, that produce an excess of suckers.

2°. Plum trees are cleft grafted on large stocks in February, & as dormant bud shield grafts on young stocks of plum & apricot trees from mid-July until mid-August & a little later on peach trees. The bud shield graft succeeds better on a shoot of the current year's wood rather than on old wood of a plum tree where it often dies of gummosis.

3°. Of all the fruit trees, the plum tree is the most adaptable to its terrain. All kinds of soil, whether cold, warm, dry, damp, heavy or loose, even those without much depth are suitable for it. Nevertheless, it flourishes more & its fruit is better in soil that's loose & a little sandy than it does in damp & compact soil. It prefers open spaces & dislikes being shielded by tall trees or high buildings.

Almost all plum trees are planted in open ground & as bush trees. The latter have to be managed & pruned correctly. The others require only require that dead wood, false wood branches, & certain prodigious formations of bushy branches called *bouchons* [*Translator's note*: i.e. stoppers or corks] be removed. Those like the Perdrigons that in our climate need espaliers & those kinds that warrant it because their fruit achieves better quality that way, are best planted in an eastern or western rather than in a southern exposure where the fruit sets with difficulty & will be a bit dry in warm years.

4°. Plum trees are pruned following the general rules. But it must be kept in mind that it's harder for them than it is for most other fruit trees to re-grow their branches. They have to be managed in a way to avoid the trimming that must be done after pruning too long & the gaps that are left after too much cutting back.

Since they dislike being sheltered, even by an espalier wall, they strive to escape it & to put out vigorous shoots in the open. Likewise for a young tree, until the time that its fruit production reduces its energy, it's necessary to cut back hard the previously pruned medium-sized branches and to let it fill out with small, even useless ones, to nip few buds, and to slant the bigger shoots. In a word, to be satisfied with keeping it from becoming cluttered. When it has taken shape & it's fully productive, it can be treated according to its strength & its condition.

5°. Instead of pulling up an old plum tree whose branches are mostly dead or worn out, if the trunk is healthy one can try to rejuvenate it. All of the branches are cut back to the trunk, or the trunk itself is sawed off four or five inches above the graft. Normally it will re-grow branches suitable for its renewal & will form a fine tree in a short time. However at the same time one ought to have a substitute ready to replace it in case it doesn't re-grow.

USES.

The different kinds of plums ripen in succession from the beginning of July until the end of October. Several are eaten fresh; almost all of them are very good in compotes. Some are suitable for making prunes, others are preserved whole, with or without the pit. A delicious marmalade is made from the Dauphine, but it needs to be seasoned. So plums prepared in different ways in the pantry are served at the table all year long.

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PYRUS,
PEAR TREE.

GENERAL DESCRIPTION.

The numerous pear tree family is divided into two main branches. One stems from the wild pear tree and the other one apparently from a union of the quince tree with the pear tree. Similarities of shape & characteristics clearly point to the first origin & at the very least lead to a presumption about that of the other. Repeated crosses between these two branches & between individuals within the same branch have produced an almost infinite variety of pear trees. Isn't it possible without being rash to further imagine that the pear tree, living on its own in the wild, would not have been averse to interacting with the service tree & with the beautiful *Mespilus* [*Translator's note*: azarole] family? The shapes, colors, & features of several pears seem to support this idea. Regardless of these notions, the pear tree in general is a large & beautiful tree that grows straight & holds up its branches well. Its varieties are identified by the size & vigor of the tree, the colors of the shoots, the shapes & sizes of the leaves & flowers, & most of all by the shape, size, color, flavor & season of the fruit. However the following characteristics are common to all of them.

The flowers consist of 1°. a not very deep cup-shaped calyx divided at the edges into five thick sections that come to a point. It often lasts until the fruit ripens.

2°. five petals slightly concave like a spoon. They're white, except in a very few varieties where the margins have some red lines, though far fewer & lighter than those on quince flowers. The size & shape of the petals vary among the different types. 3°. twenty to thirty very long white stamens that terminate in olive-shaped tips and are grooved along their length. 4°. a pistil that consists of five slender styles, not as long as the stamens and surmounted by stigmas, & an ovary that forms part of the calyx. Flowers of pear trees form clusters; the stalks are attached along a small branch or common stalk.

The ovary becomes a plump succulent fruit terminating in an eye or umbilicus rimmed by the dried up sections of the calyx. The fruit is attached by a stalk that's thick & fairly long, depending on the type. Inside there are five, sometimes only four, capsules or seed compartments surrounding the axis & encased in thin & fragile membranes. Each compartment contains one or two tear-shaped seeds consisting of two lobes & covered with a quite hard pellicle.

No other tree has as many types & varieties distinguishable by the shape of their fruit. There are pears that are pyriform, round, long, turbinate, gourd-shaped, pyramidal, &c.

Pear tree leaves are entire and are attached by fairly long stalks to the branch in alternate sequence. Their margins are smooth or more or less denticulate depending on the type. The outer surface is whitish-green or paler than the inner one and accented with thin & not very prominent veins. The inner surface is smooth & slightly shiny, indented with narrow & very shallow grooves that correspond to the veins on the outer side.

TYPES AND VARIETIES.

I. *PEAR TREE with very small early fruit.*

SMALL MUSK PEAR. SEPT-EN-GUEULE. (*Pl. I.*) [*Translator's note:* a very ancient pear, probably dating from Roman times and earlier.]

This pear tree grows vigorously & becomes quite a large tree. It's grafted on wild stock & on the quince tree.

The shoots are stout, long and straight. They're red-brown shading to purple and speckled with gray-white spots.

The buds are big, slightly flattened, pointed, and are not very free of the branch, i.e. they form a very acute angle with the branch. They're attached to wide & not very prominent stems.

The leaves are small, oval, twenty-eight *lignes* long & eighteen *lignes* wide. They terminate in a long point and are edged with sharp & very small teeth. The midrib folds downward & forms a groove at the tip of the leaf. The petiole is twenty-three to twenty-seven *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are very concave like a spoon. The sections of the calyx are long & very narrow.

The fruit grows in clusters; it's very small and round. Some resemble a top, others look somewhat like a gourd. Sometimes the stalk is long & slender, sometimes short & thick, and almost always slightly plump. Sometimes there are small bumps next to the stalk. The fruit is usually flat at the top end. There's a small indentation around the eye, which is very prominent. This is a full sized & beautiful pear when it's an inch in diameter at its most enlarged part & an inch long. Often it's smaller than that.

Its skin is quite thin. When the fruit is ripe it's yellowish green on the shaded side, red-brown on the side in the sun and almost white & more or less transparent next to the stalk.

Its flesh is semi-buttery, slightly yellowish-white, and not very delicate.
The juice has a pleasant, enhanced, & musky flavor.
The seeds are full & large in proportion to the fruit. Their coverings are almost white.
This pear ripens at the beginning of July & is valued because of its early appearance. Dry soil & open ground are appropriate for it.

II. *PEAR TREE with small turbinate rough ash-gray to yellowish summer fruit.*

MUSCAT ROYAL. [*Tanslator's note*: an old French pear grown in the kitchen gardens of Versailles. Planted by La Qintinye for Louis XIV.]

The royal musk pear is a small pear shaped like a top. It comes to a point at the stalk and is very rounded at its top where its eye is flush with the fruit. It's nineteen *lignes* long & the same in diameter. The stalk is quite slender and fifteen *lignes* long.
Its skin is a bit rough & is a gray color almost like that of the fennel apple.
Its flesh is white, semi-buttery & a little coarse.
The seeds are big & black.
It ripens at the beginning of September.

III. *PEAR TREE with medium-sized smooth pyriform green to golden yellow summertime fruit.*

MUSCAT Robert. POIRE à la Reine. POIRE d'Ambre. (*Pl. II.*)

This tree grows vigorously as a graft on wild stock but only moderately when grafted on the quince tree.
The shoots are medium-sized, straight, not very elongated, yellow green on the shaded side and a golden color on the side

in the sun & at the tip. They're speckled so little that only a few small spots are visible.

The buds are flat, triangular, lie close to the branch, and emerge from very big stems.

The leaves are light green. They're large, three inches seven *lignes* long by two inches seven *lignes* wide. They're deeply denticulate & bidenticulate. The petioles are an inch long.

The flowers are thirteen *lignes* in diameter. The petals are very concave spoonlike. Some are lightly tinged with red at the margins.

The fruit is medium-sized. It's twenty-three *lignes* in diameter & twenty-five *lignes* long. It's pear-shaped and comes to a point toward the stalk around which there frequently are several circular creases. The stalk is eight to ten *lignes* long & slightly curved. The top is rounded & the eye often has several bumps around it. The eye is large, very open, & very prominent.

Its skin is smooth, thin, and a somewhat yellowish light green.

The flesh is tender, i.e. neither buttery nor crisp, quite delicate & has almost no residue.

The juice is sweet & very flavorful.

The seeds are big & black.

This pear ripens in mid-July.

IV. *PEAR TREE with very small flattened, round, smooth, partly green to yellow, partly reddening summer fruit.*

MUSCAT Fleuri.

This is a very small pear, flattened at the top and at the stalk. It's fourteen *lignes* in diameter & twelve *lignes* high. It's round and looks like a small globe flattened at the poles.

Its stalk, quite well sustained though very slender, is twenty-one *lignes* long. Its very large eye is set flush with the fruit without any indentation around it. It's surrounded by several small, oblong & not very prominent bumps.

Its skin is quite smooth, green, somewhat yellowish on the shaded side and red mixed with tan on the side in the sun.

Its flesh is slightly greenish, semi-buttery, coarse, & leaves some residue in the mouth.

The juice, though slightly musky, is not very flavorful.

The seeds are very small & are almost white.

The fruit ripens around the twentieth of July.

V. *PEAR TREE with small, gourd-shaped summer fruit, yellow on one side to pale red on the other.*

AURATE. (*Pl. III.*)

This tree is vigorous when grafted on wild stock; on the quince tree it has only average strength.

The shoots are slender & small (especially on the quince tree). They're straight, red on the side in the sun, reddish-green on the shaded side and flecked with very tiny spots.

The buds are long, pointed, very free of the branch and are attached to prominent stems.

The leaves are round, flat, two inches five *lignes* long and twenty-one *lignes* wide (some are larger). They're very finely & not very deeply denticulate. The petiole is sixteen to twenty *lignes* long.

The flowers are thirteen *lignes* in diameter. The petals are racket-shaped, almost flat or very slightly concave.

The fruit is small, fifteen *lignes* high and the same in diameter. Sometimes its shape approximates that of a gourd and sometimes it's almost top-shaped.

The eye is located in a shallow cavity. The stalk, about an inch long, is quite full.

Its skin is thin, pale yellow on the shaded side and light red on the sun side.

Its flesh is semi-buttery and a little dry. There are some granules next to the seeds.

The juice isn't as flavorful as that of the small musk pear.

The seeds are quite full and are covered with a shell that's almost white.

This pear ripens in July, almost as soon as the small musk pear. It has the advantage of being bigger, but it's usually inferior to the latter in quality, especially when the small musk pear is from an old tree.

VI. *PEAR TREE with small, pyriform summer fruit, partly yellow, partly beautiful red.*

JARGONNELLE. [*Translator's note:* a pear known in antiquity, possibly the *Pirum Girgonum* of ancient Rome.]

This small pear apparently is a variety of the Aurate. It's a bit bigger & more oblong. It's pyriform and is rounded at the top where the eye, which is quite large, is set flush with the fruit. It's somewhat enlarged near the stalk which inserts into a very small indentation. The stalk is straight, quite thick, and nine *lignes* long. Close scrutiny reveals the presence of creases along it. The fruit is twenty-two *lignes* high & eighteen *lignes* in diameter.

Its skin is very yellow on the side in the shade & a beautiful red on the side in the sun.

Its flesh is white, quite delicate and semi-crisp.

The juice is slightly musky.

The seeds are small & are covered with a black shell.

The fruit ripens at the beginning of September & at that time it's not of much value.

VII. *PEAR TREE with medium-sized, turbinate summer fruit, green to lemon-colored.*

MADELEINE. CITRON des Carmes. (*Pl. IV.*) [*Translator's note*: favored by the court of Louis XIII and believed to have originated in a Carmelite convent.]

This is a vigorous tree. It's grafted on wild stock & on quince trees.

The shoots are of medium length & thickness. They're red-brown shading to purple and speckled with very tiny spots.

The buds are big, not very pointed and not very free of the branch. The stems are prominent.

The leaves are deep green, not very deeply denticulate, and come to a sharp point. They're twenty-five *lignes* wide and three inches long; some of them are longer. Their petioles are nineteen *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are almost round and concave like a spoon.

The fruit is medium-sized, slightly oblong, twenty-five *lignes* long by twenty-four *lignes* in diameter and top-shaped. The eye is bordered with creases & not very indented into the fruit. The stalks are about twenty-five *lignes* long and are quite full. Some of them have scars where small leaves were attached that had dried up & fallen off.

Its skin is almost entirely green. It tends to be somewhat yellow when the fruit is completely ripe. Sometimes there's a light reddish tinge on the side that's in the sun.

Its flesh is white, soft, delicate and not gritty. When it's overripe it gets mealy & soon turns soft.

The juice is sweet and is enhanced by a slight and delicate tartness & a gentle fragrance, which makes it pleasant.

The seeds are black & quite full.

It ripens in July after the Aurate.

VIII. *PEAR TREE with small smooth pyriform lemon colored early fruit.*

AMIRÉ JOANNET. [*Translator's note*: the fruit was named Joannet because it ripens around St. John's day (June 24).]

This pear tree is grafted on wild stock & on quince trees.

The shoots are long, strong, straight, thick and spotted. The thicker part is entirely green. The middle is green in the shade and reddish on the side in the sun. The tip is reddish dark brown bordering on purple.

The buds are very small, flat, stuck to & sort of squashed against the branch. Their stems are broad & are not very prominent.

The leaves are flat and somewhat lanceolate. They're two inches nine *lignes* long, twenty *lignes* wide and are very lightly denticulate. The petiole is fifteen to twenty *lignes* long.

The flowers are large, beautiful, and very open. They're eighteen *lignes* in diameter. The petals are flat, almost oval and slightly pointed. The tips of the stamens are bright purple.

The fruit is small and quite uniformly pyriform in shape. It's twenty-three *lignes* high & fifteen *lignes* in diameter. The eye is flush with the fruit, which is very rounded at that end. The size of the fruit diminishes uniformly toward the stalk, which is fifteen to twenty *lignes* long, of average thickness, & inserts at the tip of the fruit which is somewhat blunt.

Its skin is very smooth and an extremely light lemon yellow on the shaded side. The sun side sometimes takes on a subtle reddish tinge. More often it's a lesser pale yellow.

Its flesh is white & tender.

The juice is not very flavorful. It's quite plentiful as long as the fruit is not overripe.

The seeds are small & brown and are very pointed.

This fruit ripens around the end of June. Usually it's earlier than the small musk pear, to which it's preferable because of its size.

IX. *PEAR TREE with very small, flattened turbinate smooth yellow summer fruit.*

HASTIVEAU.

This pear tree looks a lot like that of the small musk pear. It's very fruitful. It's grafted on wild stock & on the quince tree.

The shoots are reddish & quite strong.

The buds & their stems are very large.

The leaves are small, round, very light green, twenty-six *lignes* long, twenty-one *lignes* wide, and not very deeply denticulate. The midrib curves downward in an arc & forms a fold at each end of the leaf. The petiole is eight *lignes* long.

The flowers are eighteen *lignes* in diameter and very open. The petals are almost oval, very slightly concave spoonlike, and ruffled & wrinkled at the edges.

The fruit is very small and shaped like a flattened top. It's fourteen *lignes* high & fifteen *lignes* in diameter. The eye is almost always oval. It's flattened and not very prominent even though there's almost no indentation at all around it, only a few small creases that make this portion look sort of puckered. The stalk is about eighteen *lignes* long. It's slender, yellow on one side and a beautiful red on the other. It has marks where some small leaves that had been attached have died.

Its skin is very smooth, light yellow everywhere except for the side in the sun where there are several small bright red spots.

Its flesh is slightly yellowish, semi-buttery, quite coarse and leaves some residue in the mouth. It turns mealy when extremely ripe.

The juice has little flavor even though it's musky.

The seeds are big & black.

This is a very pretty pear but only average in quality. It ripens about mid-July.

X. *PEAR TREE with small, smooth, turbinate summer fruit, green to somewhat golden-yellow on one side and brilliant rich red on the other.*

Woodland HASTIVEAU.

This is a small top-shaped pear, twenty *lignes* high by eighteen *lignes* in diameter. The eye is quite big and is almost level with the fruit. The stalk is slender and fourteen *lignes* long.

Its skin is smooth, quite thin, yellowish green on the shaded side and a vivid & striking deep red on the side in the sun.

Its flesh is white, tending somewhat to green. It's dry & leaves some residue in the mouth.

The juice is acrid & a little tart.

The seeds are black.

It ripens about the tenth of August. It's a fruit that's better to look at than to taste, especially at this time when there's lots of other delicious fruit around.

XI. *PEAR TREE with medium-sized, very long, shiny summer fruit, partly green to golden-yellow, partly somewhat red.*

CUISSE-MADAME. (*Pl. V.*)

This is a vigorous tree when grafted on wild stock. It does poorly on quince trees. It sets fruit with difficulty.

The shoots are reddish, quite slender, long and straight. Some are light brown.

The buds are small, flat, and are pressed against the branch. Their stems are thick.

The leaves are medium-sized and somewhat lozenge-shaped. They're two inches ten *lignes* long, two inches three *lignes* wide and slightly & very lightly denticulate. The midrib bends slightly downward. The petiole is nineteen *lignes* long.

The flowers are eleven *lignes* in diameter; the petals are rounded. This tree has a lot flowers with six & with eight petals.

The fruit is medium-sized, very elongated and narrow near the stalk where there almost always are some creases. It's two inches six *lignes* long & twenty-two *lignes* in diameter. The eye is small & almost flush with the fruit. The stalk is fifteen *lignes* long. It's somewhat fleshy next to the fruit & is the same color as the skin. The fruit is loosely attached to the tree and will fall off with the slightest breeze.

Its skin is thin & glossy all over. It's yellowish green on the shaded side & red-brown, almost the same color as the Rousselet, on the sun side.

Its flesh is semi-buttery and slightly coarse.

The juice is sweet, slightly musky, & plentiful.

The seeds often are very small.

This pear ripens at the end of July. In dry soil it's small & slightly gourd-shaped. It's twenty to twenty-two *lignes* high & about fifteen or sixteen *lignes* in diameter. The entire enlarged part is quite round, both at the middle as well as the end where the eye is flush with the fruit. It decreases in size quite abruptly toward the other end where it elongates to a point. The stalk, which is fleshy for a third of its length, just seems to be an extension of the fruit.

XII. *PEAR TREE with medium-sized, very long autumnal fruit, yellow on one side and a rich & beautiful red on the other.*

BELLISSIME d'Automne. VERMILLON. (*Pl. XIX. Fig. 1.*)

This is a vigorous tree. It's grafted on wild stock & on the quince tree.

The shoots are very long, brown, reddish, bordering on deep purple, and spotted. There is a small bend at each node.

The buds are medium-sized, somewhat flattened, sharp, and free of the branch. Their stems are prominent.

The leaves are elliptical. They terminate in almost a similar point at both ends. They're flat, very finely

& not very deeply denticulate. They're three inches two *lignes* long by twenty-five *lignes* wide. The petiole is two inches six *lignes* long & often longer.

The flowers are wide open. They're sixteen *lignes* in diameter. The petals are flat and racket-shaped.

The fruit is the same shape as the Cuisse-Madame, but it's more oblong. It's medium-sized. Its top is rounded & the eye is set in quite a deep cavity. The other end terminates in a uniform point. Its stalk is slightly fleshy at its origin, red on the side in the sun and green on the side in the shade. It's an inch long and often inserts at a slant. The fruit is three inches high & it's twenty-two *lignes* in diameter.

Its skin is quite smooth. The side in the sun is a beautiful dark red and abundantly speckled with gray spots. The shaded side is partly a less deep red and partly yellow and speckled with tan spots.

The flesh is white and crisp; in some areas it's semi-soft. It's slightly gritty next to the seeds.

The juice is sweet, flavorful and plentiful.

The seeds are brown, big & wide.

It ripens toward the end of October.

XIII. *PEAR TREE with small, smooth, pyriform summer fruit, partly white to golden-yellow, partly pale red.*

Gros BLANQUET, or BLANQUETTE.

This is a vigorous tree & it's grafted both on wild stock & on the quince tree.

The shoots are short, stout, straight, light gray and are speckled with not very conspicuous spots.

The buds are big and pointed. They're rounded, close to the branch, and are attached to broad & prominent stems.

The leaves are beautiful and wide, without denticulation.

Some of them are ruffled at the margins. They're three inches four *lignes* long & two inches six *lignes* wide. The petioles are two inches long.

The flowers are beautiful and wide open. They're seventeen *lignes* in diameter. The petals are round, flat, and seven-&-a-half *lignes* in each dimension.

The fruit is small, more longish than round. It's twenty-six *lignes* high & twenty *lignes* in diameter. It's very pear-shaped. The eye is round, very open and even with the fruit. The sections of the calyx normally stay on it for a very long time. Frequently there are some bumps close to the stalk, which is an inch long, light green, quite full and a bit fleshy.

Its skin is thin, smooth, slightly yellowish white on the shaded side and has ever so little of a light red color on the side in the sun.

Its flesh is crisp & a bit coarse; it leaves some residue in the mouth.

The juice is sweet & flavorful.

The seeds are black & medium-sized.

This pear ripens at the end of July. It's a fine fruit in that season. Its beautiful shape & the colors of its skin make it most attractive.

XIV. *PEAR TREE with small, smooth, turbinate summer fruit, partly white to golden-yellow, partly pale red.*

Gros BLANQUET rond.

The large round Blanquet pear is turbinate, i.e. shaped like a top. It's twenty-two *lignes* high & eighteen *lignes* in diameter. It's rounded at the top. The eye is quite big and not very indented into the fruit. The end of the fruit near the stalk forms a blunt point whose tip often is accented with several bumps. The stalk is thick and five *lignes* long.

Its skin is yellowish-white in the shade and has a slight touch of red on the side in the sun.

Its flesh is a little less delicate than that of the long-stemmed Blanquet.

The juice has some fragrance & is more pleasant than that of the large Blanquet.

The fruit ripens around the end of July. Sometimes it looks a little like the Bezy de l'Echasserie.

The leaves are round, smooth & are not denticulate. They're twenty-seven *lignes* long and twenty-one wide.

The shoots are slender & are almost similar to those of the Cuisse-Madame pear tree.

XV. *PEAR TREE with small, smooth, white pyriform sharply pointed summer fruit.*

BLANQUET à longue queue.

This is a vigorous pear tree when grafted on wild stock. It's of average strength when grafted on the quince tree.

The shoots are thick, straight and pearl gray on the side in the shade. On the sunlit side & at the tip of the shoot they're red-brown tending a bit to purple. They're speckled with very small spots. When this pear tree is grafted on the quince its shoots usually are pretty long & quite slender.

The buds are medium-sized and lie flat against the branch. The ones at the tip of the shoot are very small. Their stems are narrow & not very full.

The leaves are two inches wide & two inches nine *lignes* long. They're finely but not very uniformly nor deeply denticulate on the margins. Some of the leaves are almost oval. Most of them fold along the central vein. The petiole is eighteen *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are

longer than they are wide, almost flat & have several red streaks at the margins. The tips of the stamens are deep purple.

The fruit is small (a little smaller than that of the large Blanquet.) It grows in bunches. It's pyriform, rounded at the end with the eye, which is big and level with the fruit. The fruit terminates in a sharp point toward the stalk, which is long, slightly plump, & is frequently curved. The fruit is twenty-one *lignes* high & nineteen *lignes* in diameter.

Its skin is smooth, white, or a light green that's almost white; sometimes it's a very light red on the side in the sun.

Its flesh is semi-crisp, white & quite delicate.

The juice is plentiful, sweet & accented with a pleasant, almost wine-like fragrance.

The seeds are white; a few are brown.

This pear ripens at the beginning of August. It's illustrated on *Pl. VI. fig. B.*

XVI. *PEAR TREE with very small smooth summer fruit, white to golden yellow, formed like a pear-shaped pearl.*

Petit BLANQUET. POIRE à la perle. (*Plate VI.*)

This is a very fruitful tree & a more vigorous one than that of the large Blanquet. It's grafted on wild stock & on the quince tree.

The shoots are stout, straight, smooth and light gray.

The buds & their stems are very big.

The leaves are smaller than those of the long-stemmed Blanquet. They're two inches two *lignes* long, sixteen *lignes* wide, and not very denticulate at their margins. They fold downward but not along the central vein like those of the long-stemmed Blanquet. The petioles are slender and two inches long.

The flowers are seventeen *lignes* in diameter. The petals are

eight *lignes* long, six *lignes* wide, and almost flat. They're widest near the unguis.

The fruit is very small, only eighteen *lignes* high by thirteen *lignes* in diameter. It's quite round at the end with the eye, which is very prominent & large relative to the volume of the fruit. The fruit generally is marked with several bumps next to the stalk, which is plump and six *lignes* long. The fruit looks like a pearl in the shape of a pear.

Its skin is almost white, tending slightly to yellow. It's thin, smooth, and more or less transparent.

Its flesh is white, semi-crisp & quite delicate.

The juice is slightly musky & pleasant.

The seeds are quite plump and are covered with a light brown shell.

This pear ripens at the beginning of August, a little before the long-stemmed Blanquet.

XVII. *PEAR TREE with medium-sized very long summer fruit, somewhat green and marked with yellowish brown spots.*

ÉPARGNE. BEAU PRÉSENT [*Translator's note*: it is said that these pears were a present sent by the king of Naples to Prince Charles of Württemberg to remind him of a previously promised white stag]. SAINT-SAMSON. (*Pl. VII.*)

This is a vigorous pear tree. It's grafted on wild stock & on quince trees.

The shoots are thick (very thick on wild stock), straight, not very elongated, pearl gray on the side in the shade with a light reddish tinge on the side in the sun and not very speckled.

The buds are small, pointed, wide at the base and not very free of the branch. The stems are wide and not very prominent.

The leaves are large. Some of them terminate in a sharp point and are four inches long & two inches five *lignes* wide. Others are almost round, five or six *lignes* longer than they are wide. They're very finely & not very deeply denticulate. The petiole is two inches six *lignes* long.

The flowers are very large. They're nineteen *lignes* in diameter.

The petals are nine *lignes* long, seven *lignes* wide and very concave spoonlike.

The fruit is medium-sized in proportion to its diameter, which is two inches two *lignes*, but it's very long, sometimes more than three inches six *lignes* in length. It's shaped somewhat like a weaver's shuttle. From its greatest diameter, located two thirds of the way along the fruit near the top end, it diminishes in size both at the top & at the end near the stalk It's marked with several not very prominent bumps. The eye is average in size, sort of crinkled and is set in a not very deep cavity marked with several ridges. The stalk is thick & it thickens considerably more at both ends. It's usually bent & is twenty-seven *lignes* long. There's no indentation at all where it attaches to the fruit, but frequently there are creases & some protrusions.

Its skin is greenish. Sometimes it turns a little red on the side in the sun. It's mottled all over with tan spots, especially next to the stalk which is entirely that color. It's somewhat thick.

Its flesh is soft.

The juice is enhanced with a delicate, very pleasant tartness. But some soils impart an unpleasant acidity to it.

The seeds are black & often fail to develop.

This pear ripens at the end of July & at the beginning of August. It's one of the best & most beautiful of the season.

XVIII. *PEAR TREE with medium-sized very long, late fruit, from yellow to somewhat greenish and marked with yellowish brown spots.*

TARQUIN.

The Tarquin pear is long & is shaped very much like the Epargne. It's a little more pointed toward the stalk and somewhat flattened at the top. The stalk is average in length, swollen next to the fruit & sort of plump.

Its skin is delicate. In April it turns greenish yellow and is full of tan spots. On most of these fruits there's a groove, not very deep, that runs from one end to the other.

Its flesh is crisp without being dry; it's quite delicate.

The juice has a slightly tart flavor quite similar to that of the Bergamotte de Pâque pear which isn't much superior in quality to the Tarquin.

It ripens in April & May, which considerably enhances its value.

XIX. *PEAR TREE with medium-sized shiny turbinate summer fruit, partly yellow, partly deep red.*

OGNONET. ARCHIDUC d'été. AMIRÉ roux. (*Pl. VIII.*)

This pear tree prefers to be grafted on wild stock rather than on the quince, on which it grows very poorly. It's very fruitful.

The shoots are straight, medium-sized, ash-gray on one side, reddish on the other and speckled with very tiny spots.

The buds are short, wide, flat, and more or less stuck to the branch. Their stems aren't very full.

The leaves are large, round, thick and terminate in a sharp point. They're three inches four *lignes* long and two inches eleven *lignes* wide. The denticulation is not very deep and is widely spaced except toward the tip where it's deeper & finer. The petioles are thick and twenty-two *lignes* long. The midrib curves slightly downward.

The flowers are an inch in diameter. The petals are rounded. Most of the flowers have more than five petals. Some have as many as ten large petals & several open tips on their stamens.

The fruit is medium-sized and the same in height & in width, twenty-two *lignes*. It's turbinate, i.e. shaped like a top. It's flatter at the top end where there's a medium-sized eye at the bottom of a small, very smooth recess. The straight stalk,

eleven *lignes* long and quite full though not thick, attaches to the fruit in the center of a very small cavity.

Its skin is smooth, shiny, yellow on the shaded side and bright red on the side in the sun.

Its flesh is semi-crisp and often gritty.

The juice has an enhanced flavor like roses.

The seeds are pale yellow or whitish.

This fruit ripens at the end of July & the beginning of August.

XX. *PEAR TREE with small, almost blunt pyriform summer fruit, lemon yellow on one side, deep red on the other.*

PARFUM d'Août.

This is a very fruitful tree. It's grafted on wild stock & on the quince tree.

The shoots are smooth, straight, short, sometimes a bit mealy and light reddish on the side in the shade. On the side in the sun a thin pearl-gray epidermis covers a red-light brown color that approaches purple. The shoots are not very spotted & look a little like the shoots on cherry trees.

The buds are rounded, thick, short, and come to a point. They're very free of the branch and are attached to flat stems.

The leaves are slightly oblong. Their margins are barely & very finely denticulate & slightly ruffled. They usually fold along the central vein. They're only two inches eight *lignes* long by eighteen *lignes* wide. They're a very light green.

The flowers are seventeen *lignes* in diameter. The petals are much longer than they are wide, almost flat and trowel-shaped. Some red streaks are visible on their edges. The tips of the stamens are light purple.

The fruit is small, almost pear-shaped and quite enlarged at the end with the eye that is set flush with the fruit. It terminates quite uniformly

in a blunt or truncated point at the stalk, which is light yellow, eighteen *lignes* long, and slightly plump at its origin.

Its flesh is somewhat coarse.

The juice is quite plentiful and very musky.

The seeds are small, brown, and quite full. This pear ripens in mid-August.

XXI. *PEAR TREE with medium-sized round wax-colored summer fruit marked with reddish spots.*

SALVIATI. (*Pl. IX.*)

This is a vigorous pear tree when grafted on wild stock. Grafts on quince trees do poorly.

The shoots are slender. They form a small bend at each bud. They're speckled with spots that are so tiny they're scarcely visible. On the quince tree they're red; on wild stock they're greenish brown on the shaded side and a light red-brown on the sun side.

The buds are big, brown, pointed, close to the branch and held on thick stems.

The leaves are two inches ten *lignes* long and two inches two *lignes* wide. They're round at the end near the stalk, light green, irregularly & quite deeply denticulate and are folded along the central vein. The midrib curves downward. The small leaves are very oblong & narrow (thirty-three *lignes* by twelve *lignes*). Their denticulation is barely discernible. The petioles are sixteen *lignes* long, quite thick, and are just as yellow as the central vein.

The flowers are fourteen *lignes* in diameter. The petals are short ovals and very concave spoonlike.

The fruit is round and medium-sized.

It's twenty-three *lignes* high & the same in diameter. The eye is set in a not very deep recess with several small ridges at its margins. Sometimes the sections of the calyx remain green until the fruit ripens. The stalk is seventeen *lignes* long and inserts into a very small recess.

Its skin is a beautiful waxen yellow, slightly red on the side toward the sun. Sometimes it's speckled with large reddish spots & then it's rough.

Its flesh is delicious, semi-buttery, and without residue.

The juice is sweet & fragrant; at times it's not very plentiful.

Some of the seeds are flat; others are rounded & longish.

This pear ripens in August. It's good with sugar & for making ratafias.

XXII. *PEAR TREE with small, turbinate summer fruit, green to somewhat golden yellow.*

POIRE d'Ange.

This is a small top-shaped pear. It's twenty-one *lignes* high by eighteen *lignes* in diameter. It's rounded at the top where there's quite a big eye that's set almost flush with the fruit in the center of a not very deep recess. The stalk is green, slender, and seventeen *lignes* long. At the end of the fruit where it's attached there are some bumps.

Its skin is thin and yellowish green.

Its flesh is semi-crisp and quite delicate.

The juice is very musky.

The seeds are black.

This pear ripens at the beginning of August. It's not likely to get mealy. It's thought to be a variety of the Salviati, more oblong, not as big & not as good.

XXIII. *PEAR TREE with medium-sized smooth somewhat round autumn fruit, yellow on one side and green to somewhat white on the other.*

BEZI d'Hery. [*Translator's note*: a wild variety from the forest of Héry in Brittany. They were presented to Henri IV on his visit to Brittany in 1598].

This pear is not a very commendable nor a highly regarded one in most locations. Nevertheless it's not without some merit when it's in good heavy soil. It somewhat resembles the Salviati in shape. It's medium-sized and almost round. Its skin is smooth, yellow on one side, whitish green on the other. Its stalk is long & straight. It ripens in October, November, & December.

XXIV. *PEAR TREE with large smooth oval, autumn fruit, deep red on one side and pale green on the other.*

POIRE de Vitrier. (*XLIV. fig. 4.*)

The Poire de Vitrier is large, oval, two inches six *lignes* in diameter & two inches ten *lignes* high. The eye is wide, quite open and not very deeply set. The stalk is of average thickness, about an inch long, and is set flush with the fruit between several bumps.

Its skin is smooth and a deep red speckled with brown spots on the side in the sun. The shaded side is light green with darker green spots on it.

Its flesh is white and not very delicate.

The juice has a quite pleasant taste.

The seeds are black and are situated in the center of the fruit.

This is quite a beautiful fruit. It ripens in November & December.

I believe that the true Poire de Vitrier, the one known by that name in a number of gardens, is a very large & very beautiful turbinate fruit flattened at the top and terminating at the stalk in a fairly blunt point. It's three inches nine *lignes* in diameter & three inches eleven *lignes* high.

Its skin is smooth and very speckled with tan spots. It's a quite bright red on the side in the sun & lemon yellow on the shaded side. Its other properties & the time that it ripens are about the same, but its aroma & flavor have a slight scent of musk. Even though it's a vigorous tree, it does well when grafted on the quince tree. It can be described by the following phrase:

Pear tree with the largest turbinate autumn fruit, lemon yellow on one side and deep red on the other.

XXV. *PEAR TREE with green medium-sized orange-shaped very slightly flattened pimply summer fruit.*

ORANGE musquée. (*Pl. X.*)

This pear tree is grafted on wild stock & on the quince tree.

The shoots are short, of average thickness, bent slightly at each bud, not very spotted, reddish green on the sun side and pearl gray on the shaded side.

The buds are short, rounded, very thick, not very pointed, not very free of the branch and attached to a thick stem.

The leaves are almost oval and terminate in a quite short & not very sharp point. Their denticulation is uneven & almost indiscernible. They curve downward making a fold next to the stalk. They're two inches nine *lignes* long and two inches two *lignes* wide. The small leaves are long, narrow, very finely denticulate and terminate in a very sharp point at both ends. The petioles are nine *lignes* long. The ones on the large leaves are eighteen *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are oval and concave like a spoon. The sections of the calyx are very long & very narrow.

The fruit is medium-sized and shaped like an orange. It's slightly flattened from the top to the stalk. It's twenty-one *lignes* high

by twenty-five in diameter. The top is slightly rounded and the eye is set in a wide cavity; more often it's flat & the eye is almost flush with it. The stalk is thick, an inch long and inserts into the bottom of a small recess marked by several protrusions. A particularly large one of these covers the origin of the stalk.

Its skin is entirely covered with small indentations like those on a Portugal orange. It's green that takes on a very little red color. When the fruit is ripe it becomes yellow that's almost white on the shaded side & is tinged with very light red on the side in the sun.

Its flesh is crisp & becomes mealy if the fruit has not been picked while it's still slightly green.

The juice is enhanced with a very pleasant musk flavor.

The seeds are black & very plump. The axis of the fruit is hollow.

This pear ripens in August.

XXVI. *PEAR TREE with medium-sized orange-shaped summer fruit, partly ash gray, partly marked with red.*

ORANGE rouge.

This is quite a vigorous tree; it's grafted on wild stock & on the quince tree.

Its shoots are thick & straight, reddish and spotted.

The buds are big and pointed. They lie against the branch and are attached to not very prominent stems.

The leaves are almost oval, three inches six *lignes* long, two inches three *lignes* wide. They become narrower toward the tip, which is long & sharp. The denticulation on the margins is large & not very deep. The petioles are twenty-two *lignes* long. The medium-sized leaves are almost round & their petioles are about fourteen *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are long & come to a point.

The fruit has the same shape as the Orange musquée but it's bigger.
Its skin is gray & coral red.
Its flesh is crisp & becomes mealy when the fruit ripens on the tree.
The juice is sweet & musky.
This pear ripens in August.

XXVII. *PEAR TREE with small, somewhat round orange-shaped pale green summer fruit.*

BOURDON musqué.

This pear tree is grafted on wild stock & on the quince tree & it's very fruitful. But on wild stock it's slow to bear fruit.

Its shoots are quite stout, not very elongated, considerably bent at each bud, yellowish green and not very speckled.

The buds are big, wide at the base, flattened and terminate in a long & very sharp point. Their stems are very stout and swollen below the eye.

The leaves are almost round or are a shortened oval. They're two inches seven *lignes* long, two inches four *lignes* wide, smooth on the margins and folded along the central vein. The midrib curves downward. The petioles are about fifteen *lignes* long.

The flowers are quite open; they're fourteen *lignes* in diameter. The petals are round and almost flat. The tips of the stamens are bright pink.

The fruit is small, almost round, flattened near the top and shaped like an orange. It's seventeen *lignes* high & eighteen-&-a-half *lignes* in diameter. The eye is quite big and is set in a broad & shallow recess. Sometimes this pear is shaped a little like a top at the end near the stalk, which is straight & fifteen *lignes* long.

Its skin is quite thin, light green, and speckled with very small darker green spots.
Its flesh is white, coarse & crisp.
The juice is quite plentiful, musky & a little sweet.
The seeds are big, black, and quite full.
This is a type of early Orange pear that ripens in July.

XXVIII. *PEAR TREE with large orange-shaped winter fruit, partly yellow, partly a beautiful & rich red.*

POIRIER de Jardin. (*Pl. XIX. fig. 3.*)

The Poire de Jardin is big, flattened at the top and is shaped like the Orange pears. The eye is set in a usually smooth & quite deep cavity. The stalk is greenish white, thick at the end, about eight or nine *lignes* long and inserts into a small, narrow & not very deep recess. The fruit is two-&-a-half inches in diameter & two inches three *lignes* high.

Its skin is somewhat pimply. On the side in the sun it's a beautiful deep red speckled with golden yellow spots. The shaded side is streaked & lined with light red on a yellow background.

Its flesh is semi-crisp, a bit coarse & sometimes a little gritty around the seeds.

The juice is sweet & has a most delicious flavor.

The seeds are long, dark brown, & are spaced wide apart. The axis is hollow.

This is a delicious fruit & it ripens in December. Different kinds of soil cause considerable variation in size.

XXIX. *PEAR TREE with medium-sized flattened orange-shaped, later greening winter fruit.*

ORANGE d'hiver. (*Pl. XIX. fig. 4.*)

This is quite a vigorous tree. It's grafted on wild stock and on the quince tree. The shoots are straight, long and slender, light purple red and a little mealy.

The buds are short, wide at the base and sort of stuck to the branch. The stems don't project much.

The leaves are oblong and rounded at the stalk. The margins are not denticulate. The midrib curves downward near the tip. The leaves are two inches eight *lignes* long & twenty *lignes* wide. The petiole is slender and two inches four *lignes* long.

The flowers are very open. They're fifteen *lignes* in diameter. The petals are fairly long, racket-shaped, and quite concave like a spoon. The tips of the stamens are light purple, almost rose-colored.

The fruit is medium-sized, shaped like the other Orange pears, round and flattened at the ends. It's twenty-four *lignes* high & twenty-seven *lignes* in diameter (sometimes greater in both dimensions). The eye is only very slightly recessed & is almost even with the fruit. The stalk inserts into the bottom of a small cavity. It's thick & about six or seven *lignes* long.

Its skin is very thin, a brownish green that becomes a little paler when the fruit ripens. It's strewn with very tiny browner green spots and is slightly pimply. It often has very prominent warts on it.

Its flesh is white, delicate, crisp, & not gritty.

The juice is very musky & quite pleasant.

The seeds are brown, oblong, pointed, quite full & are enclosed in large compartments.

This pear ripens in February, March, & April.

XXX. *PEAR TREE with large, smooth, long pyriform green winter fruit.*

MARTIN-SIRE. RONVILLE. (*Pl. XIX. fig. 5.*) [*Translator's note*: in England known as Lord Martin's pear since the 13th century. The name is said to have originated with a former Lord of Ronville named Martin].

This pear tree is grafted on wild stock & on the quince tree.

The shoots are big & strong, straight, and reddish-brown verging on deep purple. They're speckled with very tiny yellowish spots.

The buds are very flat & sort of squashed against the branch. They're attached to flat & grooved stems.

The leaves are flat, almost oval, not denticulate, three inches six *lignes* long and two inches two *lignes* wide. The margins are somewhat wavy, & the midrib curves downward forming two folds at the ends of the leaf. The petiole is thick and nine *lignes* long.

The flower is sixteen *lignes* in diameter. The petals are nearly oval and slightly concave spoonlike. The tips of the stamens are a mixture of white & purple.

The fruit is slightly bigger than medium-sized. It's three inches one *ligne* long & two inches three *lignes* in diameter. It has an oblong pear shape and is nicely formed. The entire part near the top is very round, where the eye is set flush with the fruit. The bottom is a bit bigger on one side than on the other. The part toward the stalk terminates in a blunt point. The stalk is quite thick, especially near its end, & is nine *lignes* long. At its origin there's a sort of swelling. La Quintynie [*sic*] compares the shape of this fruit to that of a big & beautiful Rousselet.

Its skin is green, smooth & sort of satiny. It turns yellow when it ripens. The side in the sun takes on very light, sometimes quite vivid shade of red.

Its flesh is crisp. It's often somewhat gritty next to the seeds.

The juice is sweet and sugary, sometimes slightly fragrant.

Normally there are only four seed compartments in this pear. Each one contains two broad, flat, light brown seeds.

It ripens in January.

XXXI. *PEAR TREE with small, pyriform, partly greener partly dark red winter fruit.*

ROUSSELET d'hiver. (*Pl. XIX. fig. 2.*)

This pear tree is grafted on wild stock & on the quince tree & is just as vigorous on each one.

The shoots are medium-sized, longish, straight, reddish brown, quite bright & shiny and not very spotted.

The buds are flat, very short, and lie close to the branch. On their wide base there are two or three very bright red spots or small scales. The stems are not very prominent.

The leaves are two inches nine *lignes* long and twenty-two *lignes* wide. The margins are very finely & evenly denticulate & form several large folds. The petioles are two inches six *lignes* long. The leaves are slightly elliptical.

The flowers are sixteen *lignes* in diameter. The petals are almost oval, ruffled & sort of wrinkled at the tips and edged with several red streaks.

The fruit is small, two inches high & eighteen *lignes* in diameter. It's pyriform, quite similar to the Rousselet de Reims but it's not quite as big & is less pointed. The eye is flush with the fruit. The stalk is curved, seven *lignes* long, and inserts into a very shallow indentation.

Its skin is greenish on the shaded side; it yellows a little when the fruit ripens. The side in the sun is the same color as that on the Rousselet de Reims but a little darker. When it ripens it becomes more like that of the Martin-Sec.

XXXII. *PEAR TREE with small, pyriform, partly green partly dark red summer fruit.*

ROUSSELET de Reims. (*Pl. XI.*) [*Translator's note*: this pear, grown by La Quintinye in the gardens of Versailles, was enjoyed by Louis XIV].

This pear tree grows very well on wild stock & on quince trees.

The shoots are long, of medium thickness, very smooth, reddish brown, very speckled with small spots, and slightly bent at each bud.

The buds are short, triangular, flat, sort of squashed against the branch and attached to a flat stem.

The leaves are large, flat, oval, and come to a point at both ends. They're three inches ten *lignes* long and two inches four *lignes* wide. Their denticulation is large & not very deep. The petiole is twenty *lignes* long. The medium leaves are rounder & finely denticulate.

The flowers are thirteen to fifteen *lignes* in diameter. The petals are oval. Some of them are slightly pointed.

The fruit is small and pear-shaped. It's twenty *lignes* in diameter & two inches high. It's rounded at the top where there is quite a big eye set flush with the fruit. The stalk is ten *lignes* long, although often it's shorter.

Its skin is green on the shaded side. Some parts

turn yellow when the fruit ripens. The side in the sun is red-brown. It's shaded & flecked with gray all over.

It's flesh is semi-buttery, quite delicate & delicious.

The juice has a fragrance unique to this fruit and a very pleasant, musky flavor.

The seeds are wide and brown.

This pear ripens at the end of August or at the beginning of September & softens very quickly. When grown in the open it's doesn't get as big, but it's a much better pear than when it's on espalier & as a bush tree.

Although this pear tree does well in all kinds of terrain, it's best suited to loose soil. Everyone knows how superior are the Rousselet pears harvested in the courtyards & gardens of the town of Rheims to those from the countryside.

XXXIII. *PEAR TREE with small, pyriform, dark red to yellow summer fruit.*

Early ROUSSELET hâtif. Cyprus PEAR. PERDREAU.

This is quite a vigorous tree. It's grafted on wild stock & on the quince tree.

The shoots are short, slender, quite straight, reddish brown tending slightly to purple, not very spotted and covered with a sort of gray-white bloom.

The buds are short, almost flat, broad at the base, stuck to the branch and attached to a thick stem.

The leaves are round, three inches long and two inches eight *lignes* wide. They terminate in a sharp point and fold along the central vein. The denticulation on the margins is wide & not very deep. The petiole is six *lignes* long. The medium leaves are oblong, wide near the stalk which is twelve *lignes* long and very lightly & unevenly denticulate.

The flowers are an inch in diameter. The petals are rounded at the tip and not very concave spoonlike. Some of the flowers have up to nine petals.

The fruit is small, pyriform, twenty-two *lignes* high & twenty *lignes* in diameter and rounded at the top where the eye is set in a small, smooth indentation with no creases. The stalk is yellowish green, quite thick, a little fleshy and about thirteen *lignes* long.

Its skin is thin, yellow on the side in the shade and bright red flecked with gray spots on the side in the sun.

Its flesh is slightly yellow and semi-crisp. There are grains or very small granules around the seeds.

The juice is sweet & very fragrant.

The seeds are light brown and not very full.

This pear ripens around the middle of July. It looks a lot like the Rousselet of Rheims, but it doesn't have the same flavor & fragrance. It makes extremely good compotes.

XXXIV. *PEAR TREE with medium-sized sharply pyriform rough summer fruit, a dense green on one side to dark red on the other.*

ROY dété. Gros ROUSSELET (*Pl. XII.*)

This is a vigorous pear tree & is grafted on wild stock & on the quince.

The shoots are stout, strong, long, reddish brown shading to dark purple and very speckled with small yellow-white spots. They're considerably bent at each node.

The buds are flat, triangular, wider at the base than they are long, close to the branch and attached to not very prominent stems.

The leaves are large, two inches eight *lignes* wide, three inches six *lignes* long, flat,

and irregularly & not very deeply denticulate. Their petioles are eighteen to twenty *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are longer than they are wide and they curl downward. The tips of the stamens are very big.

The fruit is medium-sized, two inches nine *lignes* long & two inches three *lignes* in diameter. It's the same shape as the Rousselet of Rheims but much bigger and a little more pointed toward the stalk, which is brown and nineteen *lignes* long. There are often several small bumps where it inserts into the fruit. The top of the fruit is flattened and the eye is set in the center of a wide & deep cavity.

Its skin is rough and speckled with small gray spots. It's dark green on the side in the shade. The side in the sun is red-brown like the Rousselet. It's shaded with gray in several places.

Its flesh is semi-crisp & not very delicate.

The juice is good, fragrant & slightly tart.

The seeds are pretty long and rounded.

It ripens at the end of August or the beginning of September.

XXXV. *PEAR TREE with medium-sized long pyriform summer fruit, partly pale green, partly yellow, and speckled with faded blood-red spots.*

POIRE sans peau. FLEUR de Guignes.(*Pl. XIII.*)

This pear tree is vigorous when it's grafted on wild stock. It's only of average strength when grafted on the quince tree.

The shoots are long, straight, gray on the shaded side, reddish on the side in the sun & at the tip, and very spotted.

The buds are flat, broad at the base, pointed at the tip, stuck to the branch and attached by flat stems.

The leaves are large, three inches eight *lignes* long,

two inches six *lignes* wide, and flat. The margins are somewhat wavy & have teeth that are spaced very far apart, sharp, and not very deeply cut. The petiole is thick and twenty-two *lignes* long. The teeth on the margins of the medium-sized leaves are fine, sharp, & not very deeply cut.

The flowers are fifteen *lignes* in diameter. The petals are long, wider at the calyx than at the other end, concave spoonlike with some red streaks on the margins. The tips of the stamens are light purple.

The fruit is almost medium-sized (twenty-one *lignes* in diameter by twenty-nine high). It's frequently raised with bumps & is enlarged ever so slightly near the stalk, which is straight, quite full, eighteen *lignes* long, and inserts into an indentation. The eye is quite big & is set into the bottom of an indentation marked with ridges. At times the most enlarged part of the fruit is almost at its middle & it progressively diminishes in size toward each end. This gives it the shape of a weaver's shuttle, slightly more elongated toward the stalk than toward the eye & as such it looks like a small Epargne pear. At times it's shaped like a Rousselet but more elongated. La Quintynie [*sic*] makes that comparison.

Its skin is thin, a pale green spotted with gray on the shaded side & yellow speckled with pale blood-red spots on the side in the sun.

Its flesh is tender and leaves no residue at all in the mouth.

The juice is very good, sweet, and fragrant.

This pear ripens at the beginning of August. It fades extremely quickly.

XXXVI. *PEAR TREE with medium-sized pyriform-acuminate autumn fruit, honey-colored on one side to bright red on the other.*

MARTIN-SEC. (*Pl. XIV.*) [*Translator's note*: a very early variety grown in England along with the Martin-Sire (see above) and mentioned as early as 1292 during the reign of Edward I. It ripens around the time of the feast of St. Martin in November.]

This is a very fruitful pear tree. It's grafted on wild stock & on quince trees.

The shoots are medium-sized, very much bent at each node near the base, straight toward the tip, and not very speckled. They're pearl gray on the shaded side and reddish brown, slightly wine-colored & glossy on the side in the sun.

The buds are very slender, rounded, long, pointed, somewhat free of the branch, and held on a stout stem.

The leaves are oblong, folded on the central vein, sometimes boat-shaped, and very finely, evenly, & not very deeply denticulate. They're two inches ten *lignes* long and twenty-one *lignes* wide. The petiole is slender and twenty *lignes* long.

The flowers are seventeen *lignes* in diameter. The petals are almost round and are concave spoonlike. Some have light streaks of red on their margins.

The fruit is medium-sized, two inches in diameter & two inches seven *lignes* high. It's pyriform and looks quite a lot like the Rousselet but is less rounded at the top. The eye is closed and is set in a small indentation with creases & quite noticeable protrusions around the edges. The fruit comes to a point at the end near the stalk, which is curved & is about seven or eight, & sometimes as much as eighteen *lignes* long.

A good-looking Martin-sec pear that's well formed & in good condition is about two-&-a-half inches in diameter by three inches two or three *lignes* high. Its largest part is near the top, which is slightly elongated. The eye is set almost even with a protrusion formed by five small bumps that correspond to the five sections of the calyx.

The other end doesn't decrease uniformly in size. Rather it looks somewhat like a gourd and comes to a moderately sharp point. The surface of the fruit is uneven.

Its skin is tender, cream-colored or light hazel on the shaded side, bright red on the side in the sun and speckled with small white spots that are very conspicuous on the red.

Its flesh is quite delicate, crisp, sometimes a bit gritty.
The juice is sweet, somewhat fragrant & pleasant.
The seeds are dark brown, long, & of average thickness.
The fruit ripens in November, December, & January.

XXXVII. *PEAR TREE with small pyriform-gourd-shaped autumn fruit.*

ROUSSELINE. (*Pl. XV.*)

The Rousseline pear tree should never be grafted on a quince tree but only on wild stock.

The shoots are slender, quite straight, gray-green on the shaded side, very light reddish on the side in the sun and not very speckled.

The buds are thick at the base, rounded, very pointed, and free of the branch. Their stems are prominent.

The leaves are small, mostly round and the margins are not denticulate. They're two inches four *lignes* long, twenty-two *lignes* wide, and flat. The petioles are fourteen to sixteen *lignes* long.

The flowers are small and very open. They're only ten *lignes* in diameter. The petals are slightly longer than they are wide and are concave spoonlike. Some have a light red color at the margin. The tips of the stamens are deep purple.

The fruit is small, eighteen *lignes* in diameter by twenty-seven *lignes* high.

It's pyriform and pointed at the end near the stalk, which is thirteen to eighteen *lignes* long. Sometimes it's slightly gourd-shaped. The bottom is very enlarged. The top isn't at all rounded, but it's oblong, much smaller than the bottom & sort of compressed. The eye is situated at the tip in a small indentation with creases around it.

Its skin is a much lighter color than that of the Rousselet & even the Martin-sec.

Its flesh is semi-buttery, fine & delicate.

The juice is sweet, musky, & very pleasant.

This pear ripens in November. All authorities that have described this fruit compare it to the Rousselet. Overall, these two pears appear to resemble each other. But that can't be definitely & precisely determined based only on shape, or on color, or on flavor.

XXXVIII. *PEAR TREE with medium-sized usually blunt pyriform summer fruit, lemon yellow on one side to reddish on the other & marked with red spots.*

AH! MON DIEU. [*Translator's note*: "Oh My God" - believed to be the words of Louis XIV when he saw the tree full of fruit in his garden.]

This is a very fruitful pear tree. It's similar to the Rousselet of Rheims & it's grafted on wild stock & on the quince tree.

Its fruit is medium-sized, twenty-two to twenty-four *lignes* in diameter by twenty-seven or twenty-eight *lignes* high. It's quite round at its largest part, which is closer to the top than it is to the stalk. Sometimes the top is a little more elongated. The eye is flush with the fruit and surrounded by not very prominent bumps situated opposite the sections of the calyx. The filaments of the stamens are bright red and persist until the fruit is ripe. The part of the fruit near the stalk is oblong. It decreases in size quite uniformly & terminates in a blunt point. The stalk is fifteen to eighteen *lignes* long; it's somewhat plump at its origin and inserts flush with the fruit between several small bumps or swellings.

If the tip of this fruit were pointed, it would be pyriform.

Its skin is smooth and light lemon yellow on the shaded side. The other side is a pale light red & is speckled with small bright red spots.

Its flesh is white, semi-crisp, not very delicate & liable to soften.

The juice is quite plentiful, sweet & somewhat fragrant in dry areas.

The seeds are quite full and terminate in a very sharp point.

The fruit ripens at the beginning of September. It's reputed more for its abundance than for its quality. In some provinces the *Ah! mon Dieu* pear is called *the Love Pear, n°. 105.*

XXXIX. *PEAR TREE with medium-sized smooth truncate turbinate summer fruit, partly green to somewhat yellow, partly deep & brilliant red.*

FIN-OR d' Été.

This is a medium-sized pear, top-shaped, slightly truncate near the stalk, which is quite thick and sixteen *lignes* long. The pear is flat at the top end where the eye, which isn't very big, is set into the bottom of a small cavity.

Its skin is very smooth, a deep vivid red on the side in the sun and yellowish green spotted with red on the shaded side.

Its flesh is greenish, delicate and semi-buttery.

The juice is not unpleasant although it's a bit tart.

The seeds are black & quite full.

The fruit ripens about mid-August.

XL. *PEAR TREE with large smooth pyriform summer fruit, bright green marked with pale red spots.*

FIN-OR de Septembre.

This is a big pear, two inches nine *lignes* high by two inches four *lignes* in diameter. It's pear-shaped. The top end isn't flattened like it is on the Fin-Or d'été. On the contrary, it's raised with several not very prominent bumps & in its center there's a small recess in which the eye is situated. The stalk is about fourteen *lignes* long.

Its skin is smooth, glossy, bright green on the side in the shade and a sort of spotty pale red on the side in the sun.

Its flesh is white, delicate, and buttery.

The juice is pleasantly tart. It's a lot like that of the Beau-présent pear.

It ripens at the end of August or at the beginning of September.

XLI. *PEAR TREE with medium-sized pyriform summer fruit, honey-colored on one side to pale red on the other.*

CHAIR A DAME. CHERE ADAME. (*Pl. XVI.*)

This pear tree is quite vigorous & fruitful. It's grafted on wild stock & on the quince tree.

The shoots are short, of average thickness and bent at each node. Some are almost cream-colored; most are flax gray and are very speckled. But the spots aren't very conspicuous; they almost blend with the color of the shoot.

The buds are big, pointed and flattened. They lie against the branch and are attached by broad & quite prominent stems.

The leaves are longish, pendent, folded along the central vein, pale green & shiny, three inches long

and twenty-one *lignes* wide. The denticulation is quite fine and not very deep or sharp. The petioles are two inches to two inches six *lignes* long.

The flowers are seventeen *lignes* in diameter. The petals are racket-shaped, rounded at the tips, narrowing uniformly & coming to a point at the margin of the calyx.

The fruit is medium-sized, slightly oblong and twenty-six *lignes* high by twenty-two *lignes* in diameter. It's pear-shaped and rounded at the top where there is a large, almost protruding eye. The stalk is thick & short, nine *lignes* long at most. At the end of the fruit where the stalk attaches there are almost always several bumps & the stalk often is recurved or recumbent at that spot. As a result it inserts obliquely into the fruit, & it's more or less covered up by the bump where it implants.

Its skin is gray, dove-colored, slightly tinged with red on the side in the sun. When the fruit is fully ripe the skin is yellow, spotted with gray, & mottled with light red on the side in the sun.

Its flesh is semi-crisp and not very delicate.

The juice is sweet and is enhanced with a pleasant, light fragrance.

The seeds are black & elongated.

This pear ripens in mid-August.

XLII. *PEAR TREE with small, egg-shaped summer fruit.*

POIRE D'ŒUF.

This is a vigorous & beautiful tree when it's grafted on wild stock. It does poorly on the quince tree. Its productivity is very mediocre.

The shoots are somewhat mealy, very long & slender and very bent at each node. They're reddish green on the shaded side, redder on the side in the sun, and speckled.

The buds are short, flat, more or less stuck to the branch and held by flat stems.

The leaves are somewhat whitish, round, folded in different directions, recurved downward, and not very finely & deeply denticulate. They're two inches six *lignes* long & two inches three *lignes* wide. The petiole is fifteen *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are almost oval and concave spoonlike.

The fruit is small, roughly the size & shape of a hen's egg, oval and slightly pinched at the small end. It's fifteen *lignes* in diameter & nineteen *lignes* long. The eye is set in a small indentation that has an edge on one side raised more than on the other. The stalk is slender and is the same thickness along its entire length. It has a number of small spots on it near the end where it attaches to the branch, & it's slightly bent into a hook at that end. It's about an inch long & inserts into a small funnel-shaped recess.

Its skin on the shaded side is green, slightly yellow, like the Verte-longue, but it's speckled with reddish bran-colored spots. It's reddish mixed with green on the side in the sun.

Its flesh is delicate and semi-soft like the Rousselet. Sometimes it's tender & semi-buttery.

The juice is sugary, sweet, slightly musky and has a flavor that's pleasant and isn't tart.

Some of the seeds are white and others are black.

This pear ripens between mid-August & the beginning of September, along with the Roi d'été & the Epargne.

XLIII. *PEAR TREE with medium-sized pyriform gourd-shaped smooth shiny summer fruit, partly a rich green, partly pale red.*

INCONNU CHENEAU. FONDANTE DE BREST. (*Pl. XVII.*)

This is a fruitful pear tree. It's vigorous on wild stock but never grows straight on the quince tree.

The shoots are long, stout, and very much bent at each node, except at the tip where they're straight. They're gray, very speckled, lightly tinged with red on the side in the sun and reddish at the tip.

The buds are short, wide at the base, flattened, free of the branch and attached to a thick & wide stem.

The leaves are quite large, three inches three *lignes* long and two inches four *lignes* wide. They're finely denticulate and are attached to the branch by a petiole two inches long.

The flowers are an inch in diameter. The petals are oval and very concave spoonlike.

The fruit is medium-sized, longer than it is round, pyriform, often raised with several ridges, especially at the top end where they form an indentation in which the eye is set. Generally the end near the stalk is slightly truncate & the stalk, nineteen *lignes* long, inserts flush with the fruit. This pear is two inches in diameter & twenty-five *lignes* high. The bottom is very enlarged.

Its skin is thin, smooth, shiny & sort of oily to the touch. It's bright green, finely speckled green-brown on the shaded side and a somewhat pale red (sometimes it takes on quite a strong red color) speckled with light gray spots on the side in the sun.

Its flesh is white, crisp, delicate, & is not tender even though the pear bears that name. It has a tendency to turn soft.

The juice is sweet & enhanced with a slight, delicate tartness that's quite pleasant.

The seeds are long, black, and often fail to develop.
This pear ripens at the end of August & the beginning of September.

XLIV. *PEAR TREE with small pyriform summer fruit, partly green to yellowish, partly pale red.*

CASSOLETTE [*Translator's note*: a name that suggests a shape similar to that of a perfuming pot.]. FRIOLET. MUSCAT-VERT. LECHEFRION. (*Pl. XVIII.*)

This is an extremely handsome tree and a very fruitful one. It's grafted on wild stock & on the quince tree.

The shoots are pretty long, of medium thickness, bent at each node, gray on the shaded side (sometimes light green when grafted on wild stock) and reddish on the side in the sun & at the tip.

The buds are thin, rounded, long, very pointed, free of the branch and are attached to prominent & swollen stems.

The leaves are three inches two *lignes* long and twenty-six *lignes* wide. The midrib is curved downward. The margins are ruffled & form large wavy pleats. The teeth are large, not very pointed, & not at all deep. Some leaves have almost no denticulation. The petiole is sixteen *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are oval-oblong and not very concave spoonlike.

The fruit is small, twenty *lignes* in diameter & twenty-four *lignes* high. It's pear-shaped, rounded at the top where the eye is almost flush with the fruit. The end near the stalk is quite large & at the tip there's an indentation into which the stalk inserts. The stalk is light green, slender, & seven *lignes* long.

Its skin is a yellowish delicate green. It's lightly streaked with red on the side in the sun.

Its flesh is crisp & tender.

The juice is sweet & musky.
This pear ripens at the end of August.

I believe that the Friolet pear that I'm about to describe is not actually a variety of the preceding one but is in fact is the same pear in which the differences result only from changes in the soil.

It's medium-sized, two inches nine *lignes* high & twenty-seven *lignes* in diameter. It's pyriform, somewhat rounded at the top where there are several bumps among which is set a quite big & sort of crumpled eye. The stalk is the same color as the fruit, quite straight, and thirteen *lignes* long. Frequently there's a small swelling at its origin that somewhat distorts the fruit at that point, where it appears more or less truncate.

Its skin is green & quite smooth even though it appears to be less so due to the many green-brown spots that speckle it. The side in the sun is tinged with a very light, pale reddish color.

Its flesh is semi-crisp and a little dry & coarse.
The juice is very musky.
It ripens at the beginning of September.

XLV. *PEAR TREE with large turbinate rough summer fruit, bright green marked with tan spots.*

BERGAMOTTE d'été. [*Translator's note*: the Bergamot is an ancient pear. Its name is thought to derive from Pergamum, a city in ancient Asia Minor, or from Bergamo, a town in northern Italy, or from the Turkish *bey-armudu*, or Prince's Pear. MILAN de la Beuvriere.

This pear tree is grafted equally well on wild stock & on the quince tree.
The shoots are slender, average in length, bent at each node, mealy, reddish tending to burgundy, and not very speckled.

The buds are thick, short, flattened, & not very pointed. The stems are thick & grooved.

Some of the leaves are heart shaped, others are broad, rounded at the tip & pointed near the petiole. They're slightly ruffled on the margins, floury white, and are not denticulate, except at the tip where there's some denticulation that's not very deep. The petiole is fourteen to eighteen *lignes* long. The leaves are three inches long & two inches three *lignes* wide.

The flowers are fifteen *lignes* in diameter. The petals are almost round, slightly concave spoonlike, & ruffled at the tip.

The fruit is large, turbinate, and has the same shape as the autumn Bergamot pear. It's two inches ten *lignes* high & thirty *lignes* in diameter. The top end is slightly raised. The eye is situated at the bottom of a cavity with ridges around it. The stalk is thick, green, six *lignes* long, and inserts into the bottom of a small indentation.

Its skin is rough to the touch and bright green with tan spots. Sometimes it's tinged with light red on the side in the sun.

Its flesh is semi-buttery, almost tender but liable to become mealy if the fruit hasn't been picked while it's still slightly green.

The juice, though not flavorful, has a quite pleasant delicate tartness.

The seeds are small & frequently fail to develop.

This fruit ripens at the beginning of September.

XLVI. *PEAR TREE with just about medium-sized, flattened turbinate summer fruit, yellow on one side, red on the other.*

BERGAMOTTE rouge. (*Pl. XIX. fig. 6.*)

This is a vigorous pear tree, & it's grafted on wild stock & on quince trees. It's very fruitful.

The shoots are stout & strong and are a yellowish light brown flecked with large spots.

The buds are small, very short, not very free of the branch and are attached to thick & swollen stems.

The leaves are small, oblong, wide near the petiole, which is slender & very long (two inches six *lignes*). The leaves are flat and have no denticulation. They're thirty-two *lignes* long and nineteen *lignes* wide.

The flowers are sixteen *lignes* in diameter. The petals are almost oval and are concave spoonlike.

The fruit is medium-sized, turbinate, twenty-four *lignes* in diameter by twenty-two *lignes* high. The top is somewhat flattened & the eye is set in a small indentation. The stalk is three to ten *lignes* long, quite thick, and inserts into a narrow cavity or indentation.

Its skin is deep yellow. It turns redder on the sun side than the other Bergamot pears do.

Its flesh is almost tender. It turns mealy & softens quickly if the fruit is left to ripen on the tree.

The juice is flavorful & very fragrant. It's not so plentiful when the fruit is extremely ripe.

The seeds are light brown and quite full.

This pear ripens about mid-September. It's quite musky & slightly dry but is very good in compotes. Some nurserymen call it the *Crassane d'Eté* because the tree has the same habit as that of the Crassane pear tree. Since it's very full of a lot of fruit, its largest pears often are only twenty-one *lignes* in diameter by nineteen or twenty *lignes* high.

XLVII. *PEAR TREE with medium-sized, somewhat rounded turbinate autumn fruit streaked with yellow, green, & blood red bands.*

BERGAMOTTE SUISSE. (*Pl. XX.*)

This is a fruitful pear tree & it does well when grafted both on wild stock & on the quince tree.

The shoots are medium-sized, long, straight, striped or variegated yellow & green & with a bit of red on the side in the sun.

The buds are small, rounded, and very free of the branch. The stems are flat.

The leaves are oblong, twenty-seven *lignes* wide and thirty-seven *lignes* long. The margins have several teeth at some distance from one another & barely discernible. The margins form wavy bends or undulations. The midrib curves downward. The petiole is two inches six *lignes* long.

The flowers are sixteen *lignes* in diameter. The petals are almost lozenge shaped and concave spoonlike.

The fruit is medium-sized, twenty-seven *lignes* in diameter & twenty-eight *lignes* high. Its stalk, six to twelve *lignes* long, inserts into a very small cavity & more often into the middle of a small flattening. The stalk is of average thickness and white except at some places on the side in the sun that are tinged with gold. The fruit is top-shaped at the end near the stalk. The end with the eye also becomes smaller & is slightly elongated. Sometimes it's flattened.

Its skin is smooth with green & yellow stripes. The side in the sun takes on a light tinge of red which is much more evident on the yellow stripes than on the green ones.

Its flesh is tender & buttery and not gritty.

The juice is sweet & plentiful when the fruit hasn't yet ripened on the tree.

The seeds are light brown, quite full, and terminate in a long point.

It ripens in October.

This pear tree doesn't like an exposure with too much sun. It appears to be a variety of the one that follows.

XLVIII. *PEAR TREE with large, flattened-turbinate autumn fruit, partly golden yellow, partly pale reddish.*

BERGAMOTTE d'Automne. (*Pl. XXI.*)

This tree is grafted on wild stock & on the quince tree. It prefers to be on espalier since it becomes scurfy as a bush tree & in open ground.

The shoots are short, quite thick, light gray tending toward green and speckled with very tiny spots.

The buds are big, rounded, long, very pointed and quite free of the branch. Their stems are almost flat.

The leaves are long and their denticulation is almost indiscernible. The midrib curves downward. They're three inches long and nineteen *lignes* wide. The petioles are nine *lignes* long; those on the medium-sized leaves are two inches long.

The flowers are fourteen *lignes* in diameter and very open. The petals are pretty long and almost flat.

The fruit is big and flattened at the top. It's twenty-eight *lignes* in diameter & twenty-seven *lignes* high. Sometimes it's bigger than that, but more often it's smaller, depending on the soil. The eye is small and is set in a smooth & not very deep cavity. It often is missing sections of the calyx. The quite thick stalk is six to ten *lignes* long and also inserts into small cavity.

Its flesh is tender & buttery.

The juice is sweet, sugary, very fresh and enhanced with a slight fragrance.

The seeds are light brown, quite full, elongated and come to a very sharp point.

This pear ripens in October, November, & sometimes later. It's one of the oldest known pears. It always has been highly regarded & deservedly so. It's best illustrated on *Pl. XIX. Fig. 7.*

XLIX. *PEAR TREE with large, rounded, green to ash gray autumn fruit.*

CRASANNE. BERGAMOTTE Crasanne. (*Pl. XXII.*)

This is a vigorous pear tree. It puts out a lot of branches and it's grafted on wild stock & on quince trees, but it does better on wild stock. It prefers good quality slightly damp soil.

The shoots are long, of average thickness, slightly bent at each node, light gray tending a little to green on the shaded side, tinged a very light reddish on the side in the sun, and speckled.

The buds are round, quite thick especially at their base, very free of the branch and are held on flat stems.

The leaves are flat and wide near the stalk. They come to a point and are slightly bent downward. They're two inches six *lignes* long, two inches three *lignes* wide, not very denticulate; the denticulation is uneven & not very deep. The petiole is twelve to fourteen *lignes* long. The medium-sized leaves are long, narrow, not denticulate, and are very wrinkled or folded at the margins.

The flowers are very open. They're fourteen *lignes* in diameter. The petals are almost round and not very concave spoonlike.

The fruit is big, round and sometimes slightly turbinate. It's two inches five *lignes* high & two inches seven *lignes* in diameter. In soil that's very suitable for this pear tree it bears fruit up to three inches two *lignes* in diameter by three inches high. The stalk is slender, slightly curved, fifteen *lignes* long & inserts

into a small smooth narrow funnel-shaped cavity. The top part is flattened & the small eye is set in a smooth, deep and narrow cavity.

Its skin is greenish gray and sometimes has small reddish spots. When the fruit ripens it turns slightly yellow on the side in the sun.

Its flesh is very soft & buttery and is not likely to turn mushy.

The juice is sweet, very plentiful, slightly fragrant & is enhanced with a little tartness, which is not unpleasant as long as it's not too strong. That depends on the quality of the soil.

The seeds are enlarged & are quite full. Sometimes there are only four seed compartments in this fruit.

This pear ripens in November. It's valued by everyone.

L. *PEAR TREE with leaves that have white margins and medium-sized rounded green to ash gray autumn fruit.*

CRASANNE panachée. (*Pl. XXIII.*)

The variegated Crasanne is a variety of the preceding one; there's no difference in the fruit.

The shoots are slender & pretty long.

The buds are small, rounded, pointed, and free of the branch.

The leaves are very small, longish, and edged in white. They bend in different ways & in different directions. Their denticulation is very fine, sharp, & not very deep. The petioles are slender & eight to ten *lignes* long.

This pear tree makes a very striking & very delightful impression. But it shouldn't be planted on espalier nor in a spot with too much sun, which will redden & spoil the white borders on its leaves. They'll then look partly dried up rather than variegated.

LI. *PEAR TREE with large, nearly pyriform winter fruit, golden yellow on one side, pale reddish on the other.*

BERGAMOTTE de Soulers. BONNE de Soulers. (*Pl. XLIV. Fig.1.*)

This pear tree is grafted on wild stock & on the quince tree.

The shoots are stout, light green on the side in the shade, very lightly tinged with red on the side in the sun, and speckled with grayish white spots. There's a very noticeable bend at each node.

The buds are large, pointed, quite rounded and covered with scales, some of which are gray and others brown. They're free of the branch and are held on thick stems.

The leaves are medium-sized, oval, almost round, and two inches eight *lignes* long by two inches four *lignes* wide. They're very lightly denticulate and frequently boat-shaped. The petioles are an inch long.

The flowers are fifteen *lignes* in diameter. The petals are longish and trowel-shaped. Some are tinted light red on the margins.

The fruit is medium-sized and round. It's twenty-five *lignes* high & thirty *lignes* in diameter. The top is more rounded than it is on the other Bergamot pears. The eye is not very deeply recessed. The stalk is quite thick, eleven *lignes* long, and slightly inserted into the fruit. When the tree is planted with suitable soil & exposure suitable for it, the fruit is large, three inches high by thirty-two *lignes* in diameter, and oblong, almost pyriform. It comes to a somewhat blunt point at the stalk. The top is slightly oblong rather than flattened. Consequently its more customary shape is quite different from that of other Bergamot pears.

Its skin is smooth, shiny, whitish or very light green and speckled with darker green spots. It turns yellow

when the fruit is ripe. The side in the sun takes on a very light red-brown tinge.

Its flesh is buttery, tender, & not gritty.

The juice is sweet & has a pleasant flavor.

The seeds are big, very full, and come to a long & very sharp point.

The fruit ripens in February & March.

LII. *PEAR TREE with very large rounded-turbinate winter fruit, green on one side, lightly pale reddish on the other.*

BERGAMOTTE de Pâques ou d'hiver. (*Pl. XXIV.*)

This is a vigorous pear tree. It's grafted on wild stock & on the quince tree.

The shoots are short, stout, greenish gray, slightly bent at each bud and speckled with very small spots that are not very conspicuous.

The buds are big, pointed, slightly free of the branch and attached to a flat stem.

The flowers are seventeen *lignes* in diameter. The petals are almost flat and are trowel-shaped.

The leaves are three inches four *lignes* long, two inches five *lignes* wide, elliptical at the end near the stalk, which is white and two-&-a-half inches long. The other end comes to a uniform point. They're bright green, folded along the central vein, and finely, evenly, & not very deeply denticulate on the margins. The veins aren't very conspicuous.

The fruit is very big, three inches in diameter & the same in height. Sometimes its diameter exceeds its height, & then it's two inches eleven *lignes* in diameter by two inches eight *lignes* high. It's round. The greatest diameter is near the eye, which is small and slightly recessed. Sometimes that end is rounded;

most often it's somewhat flattened. The end toward the stalk gets progressively smaller. The stalk is thick, about four or five *lignes* long, often slightly curved & slanted and inserts into a round funnel-shaped recess that's not very wide.

Its skin is green, speckled with very tiny gray spots. It turns slightly yellow when it ripens. The side in the sun is a very light shade of red.

Its flesh is very white, semi-buttery and not gritty.

The juice is quite plentiful and is enhanced with a subtle flavor that tends to be slightly tart. If it's not too strong, it's pleasant, especially during the season when this pear is eaten.

The seeds are large, flat, pointed, brown, and frequently fail to develop.

The fruit ripens in January, February, & March.

LIII. *PEAR TREE with very large, nearly turbinate, green extremely late fruit.*

BERGAMOTTE de Hollande. AMOSELLE.

BERGAMOTTE d'Alençon. (*Pl. XXV.*)

This pear tree grows well. It's grafted on wild stock & on quince trees.

The shoots are long, of average thickness, slightly bent at each node, greenish gray on the side in the shade, yellow brown on the sun side, covered with a thin light pearl-gray epidermis, and scattered with not very conspicuous spots. The color & the buds make them look like the shoots of cherry trees. They don't grow out at all straight, but they curve in different directions rather like those of the Crasanne pear tree.

The buds are brown, long, thick, rounded, pointed, and free of the branch. Their stems aren't very prominent.

The leaves are oblong, rounded toward the stalk,

three inches four *lignes* long and twenty-five *lignes* wide. The midrib curves downward. The margins are slightly ruffled; their denticulation has so little depth that it's scarcely discernible. None is visible at all on the medium-sized leaves. The petioles are twenty-two *lignes* long.

The flowers are seventeen *lignes* in diameter and very open. The petals are a bit longer than they are wide, almost flat, and slightly ruffled on the margins. The tips of the stamens are light purple.

The fruit is very big, about three inches in diameter by two inches nine *lignes* high. It's flattened and has a shape quite like that of the Bergamots. The most enlarged part is at the top, which is flattened. The eye, which retains only a few sections of the calyx, is set at the end of a smooth, deep, & not very wide cavity. The end near the stalk comes to a very blunt point set off by several small bumps & creases that form a small indentation where the stalk, eighteen *lignes* long & quite thick, is inserted. The surface of the fruit is accented with several not very prominent bumps that in no way interfere with its appealing shape & its uniform contour.

Its skin is green in the autumn and marked with some brown spots. In February & March it becomes slightly wrinkled, light yellow, & the brown flecks or spots are more apparent.

The juice is plentiful, pleasant, and quite flavorful. It has a hint of the Bartlett pear in it.

The seeds are well formed. The compartments containing them are average in size, & the axis of the fruit that runs between the compartments is hollow.

This pear will keep until June. It's one that is

most worthwhile cultivating. It's believed to have originated in Alençon [*Translator's note:* a town in an agricultural region west of Paris] where it's known as the *Alençon Bergamotte.*

LIV. *PEAR TREE with large, somewhat turbinate autumn fruit, partly golden yellow, partly slightly red.*

BERGAMOTTE Cadette. POIRE de Cadet. (*Pl. XLIV. Fig. 2.*)

This is a very vigorous pear tree. It's grafted on wild stock & on the quince tree & it yields a lot of fruit.

The shoots are short, stout, straight, yellow gray, almost russet and flecked with large spots.

The buds are large, oblong, rounded, pointed, free of the branch, and held on thick stems.

The leaves are average-sized, three inches long and twenty-five *lignes* wide, rounded at the end near the petiole and terminating in a point at the other end. The veins are very prominent even on the upper side of the leaf. The midrib curves downward, & most of the leaves fold along the central vein. The margins are smooth & have no denticulation at all. The petioles are about nine *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are rounded and concave spoonlike. The tips of the sections of the calyx have a slight tinge of red.

The fruit is big. It's two inches eight *lignes* in diameter & two inches seven *lignes* high with a somewhat turbinate shape. In soil that isn't very suitable for this pear tree the fruit is generally only twenty-four or twenty-five *lignes* high by twenty-five or twenty-six *lignes* in diameter. It's rounder & shaped more like the orange pear than turbinate. The top end is quite rounded & the eye, very open, is set in a flattened part of it. The thick stalk,

eight to ten *lignes* long, inserts into a not very deep indentation & often is covered with a small protuberance at its origin.

Its skin is very smooth. It's lightly tinged with red on the side in the sun. The other side turns yellow when the fruit ripens.

Its flesh & juice are good though not as good as most other Bergamots.

The seeds almost always abort. The axis of the fruit is hollow.

This pear ripens in October. If it's ever so slightly overripe, it becomes mealy.

LV. *PEAR TREE with large, somewhat rounded autumn fruit, deep golden yellow (either ashen or whitish).*

MESSIRE-JEAN doré. (*Pl. XXVI.*)

This pear tree is grafted on wild stock & on the quince tree.

The shoots are thick, short, straight, gray, not very speckled and sometimes a little mealy.

The buds are thick, short, slightly flattened, triangular, very sharply pointed at the tip and fairly close to the branch. Their stems are broad & not very raised.

The leaves are large, three inches three *lignes* long and two inches three *lignes* wide. The midrib curves downward. The denticulation is large, quite deep on the large leaves but not very deep on the others. The petioles are six *lignes* long.

The flowers are sixteen *lignes* in diameter. The petals are nearly oval and concave spoonlike.

The fruit is big, almost round and more enlarged at the middle than at the ends.

The stalk, ten to fourteen *lignes* long,

inserts into a wide & not very deep cavity. The eye is small and is set in a smooth & not very deep indentation. The fruit is two inches eight *lignes* in diameter & two inches six-&-a-half *lignes* high. Older trees in good soil sometimes yield pears that are three inches four *lignes* in diameter by three inches two *lignes* high.

Its skin is slightly rough. It's a golden yellow that's very browned by spots that almost completely cover it.

Its flesh is crisp, often gritty, & somewhat liable to soften.

The juice is plentiful, very flavorful & delicious.

The seeds are a very light brown, small, not very pointed, and very full.

The fruit ripens in October.

The color of the Messire-Jean pear varies with the age and vigor of the tree & the stock on which it's grafted. If the tree is old & in decline, the fruit is very pale yellow, almost white. If it's young, vigorous and grafted on wild stock, the fruit is gray, it doesn't grow as big, & it's a little more gritty. So the gray, white, and golden Messire-Jean are the same kind & not three different types, nor even three different varieties.

LVI. *PEAR TREE with small, flattened-turbinate summer fruit, green to somewhat white.*

ROBINE. ROYALE d'été. (*Pl. XXVII.*)

This pear tree greatly resembles the Cassolette. It's grafted on wild stock & on the quince tree. It produces fruit with difficulty on wild stock.

The shoots are quite stout, straight, gray green on the shaded side and russet on the side in the sun (the tips are green on the side in the shade and reddish on the side in the sun). They're speckled with quite big light gray spots.

The buds are big and are very free of the branch. Their tips are very sharp & a shiny light brown. The stems are broad & flat.

The leaves are large, three inches long and two inches five *lignes* wide. They bend slightly downward and are attached to the branch by a stalk seventeen *lignes* long. The denticulation is very fine & scarcely discernible.

The flowers are large, nineteen *lignes* in diameter. The petals are very elongated, narrow, sharp at both ends and attached by a very long unguis.

The fruit is small, rounded, and shaped like a very short top or like a small Bergamot. It's slightly flattened at the top end that has quite a deep indentation where the eye is set. Occasionally it's not so deep but it's very wide. There's no cavity where the stalk inserts but there are some bumps. It's only separated from the fruit by a very narrow groove. It's average in thickness & it's eighteen *lignes* long. The fruit is twenty-one *lignes* high by twenty *lignes* in diameter.

Its skin is a whitish green with brownish green spots. It turns yellow when the fruit ripens.

Its flesh is white, semi-crisp, and a bit dry. It's not liable to soften.

The juice is very musky & sweet.

The seeds are brown, wide, and quite full.

This pear ripens in August. It grows bigger when the pear tree is grafted on the quince tree rather than on wild stock.

LVII. *PEAR TREE with large, somewhat rounded, flattened turbinate summer fruit, partly green to golden yellow, partly pale rose-colored.*

EPINE-ROSE. POIRE de Rose.

This pear tree is grafted on wild stock & on quince trees.

The shoots are thick, not very elongated, quite bent at each node, reddish brown bordering on deep purple, and very much speckled with very tiny light gray spots.

The buds are flat, very broad at the base, practically stuck to the branch and attached to thick stems.

The leaves are large and very wide near the petiole, which is thick and fifteen *lignes* long. The denticulation on the margins is barely discernible, uneven, not very deep & widely spaced. The leaves are three inches long & two inches seven *lignes* wide.

The flowers are fifteen *lignes* in diameter. The petals are oval & very flat.

The fruit is big, round, flattened from the top to the stalk, twenty-seven *lignes* long in this dimension by thirty in diameter. Its shape closely resembles that of the Crasanne. It's flattened at the top, which has a not very large indentation containing quite a big eye. The stalk, the color of wood, twenty *lignes* long and usually recurved, likewise is set into an indentation.

Its skin is yellowish green and flecked & mottled with brown. On the side in the sun it's tinged a reddish tan.

Its flesh is white, tender and semi-soft.

The juice is musky & sweet and has the same flavor as that of the Ognonnet pear. That's the extent of the similarity between the Epine-Rose pear tree & the Ognonnet, even though several authorities also draw comparisons between their wood, their leaves & the shapes of their fruit.

The seeds are black & often abort.

This pear ripens from the beginning to the middle of August. Some gardeners call it the *Caillot-Rosat*, but that is another pear that ripens at the end of September. This is a beautiful one & would be more commendable if it didn't soften so quickly & if its juice didn't possess a little too much acidity. Merlet, who seems not to have known about it, gave its name to three pears that are very different from it, the *Eau-rose* pear, the *Tulipée* pear, & the *Malta* pear.

LVIII. *PEAR TREE, semi-double-flowered with large, flattened-turbinate smooth winter fruit, partly green, partly deep red.*

DOUBLE-FLEUR.

PEAR TREE, semi-double-flowered with large, flattened-round winter fruit with green & yellow stripes & marked with red spots.

DOUBLE-FLEUR panachée. (*Pl. XXVIII.*)

The double-flowered pear tree & its variegated variety are very vigorous & are grafted on wild stock & on quince trees.

The shoots are big & strong, yellow green on the shaded side and reddish on the side in the sun. The ones on the variegated double-flowered tree have reddish, green-brown, & yellow streaks.

The buds are large & flattened.

The leaves are very large, flat, very wide at the end near the stalk and progressively narrowing toward the tip, which is very sharp. They're thick, substantial and unevenly & not very deeply denticulate. They're three inches ten *lignes* long and two inches seven *lignes* wide. The petioles are thick and twenty *lignes* long.

The flowers are large, beautiful, & very open. They're eighteen *lignes* in diameter. They have ten to fifteen petals. The four or five inner petals are much smaller than the others;

they're long, narrow and ruffled on the margins. The large ones are almost round and concave spoonlike. The tips of the stamens are big and light purple mingled with white.

The fruit is big, round, and flattened. It's thirty *lignes* in diameter & twenty-six *lignes* high. The top is flattened & the eye is located there in a smooth & wide indentation. The stalk is straight, eleven *lignes* long and inserts into a very narrow cavity. The fruit of the non-variegated double-flowered pear tree is more oblong near the stalk. Its diameter is almost equal to its length, & it looks a lot like a Bergamot. The fruit of the variegated double-flowered pear tree is more rounded at the end near the stalk; its diameter is greater than its height & it's closer to the winter Orange pear in shape.

Its flesh isn't gritty; it takes on a lot of color when heated.

The juice is plentiful.

The seeds are flat, wide, and dark brown.

This pear ripens in February, March, & April. It's very good when stewed & in compotes. That's all it's good for.

LIX. *PEAR TREE, with small, somewhat round autumn fruit, green, somewhat obscured with spots.*

BEZY de Caissoy. [*Translator's note*: thought to have originated in the forest of Quessoy in Brittany.] ROUSSETTE d'Anjou. (*Pl. XXIX.*)

This tree prefers to be planted in good quality, pure, somewhat heavy soil. It can't be grafted on quince trees at all, & even when grafted on wild stock it's very frail & not very vigorous when it's in loose soil.

The shoots are long, straight, slender, quite full of buds, light brown, mealy, & not very speckled.

The buds are big relative to the shoot. They're slightly flattened and are free of the branch. Their stems are thick and swollen above & below the eye.

The leaves are small, round, uniformly & quite deeply denticulate, sometimes farinaceous. They're twenty-three *lignes* long and nineteen *lignes* wide.

The flowers are eleven *lignes* in diameter. The petals are oval and concave spoonlike. The tips of the stamens are very deep purple.

The fruit is small, round, and slightly flattened at the top. It's nineteen *lignes* in diameter & seventeen *lignes* high. The eye is small and not very deeply recessed. Its stalk is straight, six *lignes* long and inserts into a cavity that's deep & wide relative to the small size if the fruit. The fruit is plentiful & grows in clusters.

Its skin is green. It turns yellow when the fruit ripens, but it's so thoroughly covered with brown spots that the color is barely visible.

Its flesh is tender & buttery.

The juice tastes very good & has a lot of the Crasanne in it, though it has none of the tartness. When this pear tree is declining in soil that doesn't agree with it, the juice is tasteless or has a flavor that's not very pleasant.

The seeds are small, black, & often abort.

This pear ripens in November. It's highly regarded in Brittany where it grows well; that's where it comes from.

Another Roussette pear (*Fig.* 2.), is also cultivated in Brittany. It's not as small as the preceding one. It's twenty-one *lignes* in diameter & twenty-one *lignes* high.

Its greatest diameter is near the top, which is slightly flattened. There the eye is flush with the fruit with only a very small indentation around it. The fruit becomes progressively smaller toward the stalk, which is straight, nine *lignes* long, and inserts into a deep cavity bordered by creases & small bumps.

Its skin is smooth, hazel colored, almost like the golden Messire-Jean. At times it's slightly gray like the gray Messire-Jean.

Its flesh is very white and somewhat crisp. It becomes tender when the fruit is completely ripe. There are several granules or very tiny grains around the seeds.

The juice is plentiful. It's accented with a slight tartness or even bitterness that's lost when the fruit is extremely ripe, & then it's sugary & sweet.

The seeds are quite full & large relative to the fruit. They're situated further down near the eye, something that I've never seen in any other pear. The axis is hollow along the whole length of the seed compartments & the umbilicus is open very far into the fruit.

This fruit ripens in October, November & part of December. It shares something of its flavor with the Crasanne & a lot with the Messire-Jean in the color of its skin and in the color & aroma of its flesh. But it's not as good a pear as either of them.

LX. *PEAR TREE, with large autumn fruit pointed at both ends, somewhat green and marked with scabby spots.*

FRANC-RÉAL.

This is a vigorous & fruitful tree. It's grafted on wild stock & on the quince tree.

The shoots are long, average in thickness, considerably bent at each bud, yellowish green, spotted, and powdery.

The buds are short, flat, triangular, free of the branch,

and are held on stout stems that are enlarged above & below the eye.

The leaves are quite large and are wide near the stalk. They narrow at the other end & come to a point. They're uniformly, finely, & not very deeply denticulate. They're powdery on the surface and are bent downward at the tip & sometimes on the margins. They're two inches ten *lignes* long & thirty-four *lignes* wide. The stalk is about seven or eight *lignes* long. The leaves on the fruiting branches have a much longer stalk & have smooth margins.

The flowers are an inch in diameter. The petals are oval and flat. The tips of the stamens are a deep purple.

The fruit is big; it's the same in height & diameter. Its most enlarged part is at its middle. It gradually diminishes in size toward the top where the eye, which is small, is set in a not very deep indentation. It diminishes in size even more toward the stalk, which is thick, nine *lignes* long, & inserts almost flush with the fruit. This pear does not have an attractive shape. It's two inches ten *lignes* in diameter & the same in height. Sometimes it's much bigger than that, almost pyriform, and a little higher than it is in diameter.

Its skin is greenish and is flecked with specks & small red spots. It turns yellowish when the fruit is ripe.

The seeds are dark brown, large and flat.

This pear is very good when stewed under a bell-glass & in compotes. It ripens early, in October & November.

LXI. *PEAR TREE, with large, long, curved winter fruit, partly lemon yellow, partly reddish.*

BEQUESNE.

This is a large & vigorous pear tree & is grafted better on wild stock than on quince trees.

The shoots are sort of shriveled-looking, reddish, and flecked with light gray spots.

The leaves are medium-sized, narrow and very lightly denticulate (some of them have no denticulation at all). They're two inches nine *lignes* long and twenty-two *lignes* wide. Sometimes they're wavy or undulating along the margins. The petioles are eleven *lignes* long.

The fruit is long, substantial and quite well formed. It's frequently a little bumpy at one end & sort of arched at the other. Its largest diameter is near its middle; it decreases in size toward both ends & especially near the stalk where it terminates in too sharp a point to be considered pyriform in this part. It's usually rounded at the top where the eye, which is small, is indented into quite a wide recess. The stalk is straight, ten *lignes* long, and inserts flush with the fruit. This pear is two inches four *lignes* in diameter & it's two inches ten *lignes* high.

Its skin takes on a light tinge of red on the side in the sun; the other side turns lemon yellow when the fruit ripens. But it's almost completely covered with gray specks & spots, especially on the sun side.

The seeds are longish & black.

This pear is very good when stewed & in compotes. Its flesh is soft & turns a lovely color when it's cooked. The juice is very plentiful & isn't tart; it's a little bland when the fruit is very ripe. It's consumed from October until February.

LXII. *PEAR TREE, with medium-sized, long pyriform summer fruit, green, golden yellow toward the pedicel.*

EPINE d'été. FONDANTE musquée. (*Pl. XXX.*)

This pear tree is grafted on wild stock & on the quince tree.

The shoots are long, of average thickness, a little bent at each node, speckled with whitish spots, light green on the shaded side and with a light reddish tinge on the side in the sun.

The buds are small, flattened, triangular and lie against the branch. Their stems are quite prominent.

The leaves are large, oblong, almost flat, three inches six *lignes* long and two inches four *lignes* wide. The denticulation is large but not very deep. Their stalk is nineteen *lignes* long.

The flowers are fifteen *lignes* in diameter. Their petals are rounded, slightly elliptical at the tip, and concave spoonlike.

The fruit is medium-sized, long, one inch ten *lignes* in diameter & two inches ten *lignes* long. It has the shape of a very elongated pear and it's rounded at the top. The eye is quite large & is set almost even with the fruit. The other end comes to a point & the stalk, an inch long, inserts there with no indentation.

Its skin is thin, smooth, glossy, and sort of greasy to the touch. It's meadow-green in color at the eye end near the eye & yellowish green at the end near the stalk.

Its flesh is soft, quite delicate, sometimes a bit mealy.

The juice is flavorful & very musky.

The seeds are black & full.

This pear ripens at the beginning of September. It's a fine pear. It was named by Louis XIV.

LXIII. *PEAR TREE, with medium-sized, longer pyriform smooth dark green summer fruit.*

POIRE-FIGUE.

The fig pear is very similar to the one above. It's medium-sized, pyriform, very oblong,

one inch ten *lignes* in diameter & three inches high. Its top is rounded & slightly enlarged, & the eye, which isn't big, is set in a not very deep cavity. The other end becomes elongated as it diminishes in size. The stalk, thick, brown, knobby, one inch long, looks as though it were an extension of the fruit. The top end is rounded only along its length & not around its diameter. Consequently this pear when viewed from the end with the eye appears to be triangular.

Its skin is quite smooth & is green-brown, even when the fruit ripens.
Its flesh is white, tender, & quite delicate.
The juice is sweet, sugary & is somewhat similar to that of the Epargne.
The seeds are long & black.
It ripens at the beginning of September.

LXIV. *PEAR TREE, with large, long, smooth green to white autumn fruit.*

EPINE d'hiver. (*Pl. XLIV. fig. 3.*)

Cultivation of this pear tree requires some care. In dry ground it prefers to be grafted on wild stock, & in damp ground on quince trees. If neither dryness nor dampness prevails in the soil & if the tree grows well there on the quince tree, it should be grafted on the quince tree. Its fruit will be the better for it. It prefers a good exposure. It does quite well in open ground when it's grafted on wild stock & planted in damp soil.

The shoots are average in length & strength. They're slightly bent at each bud and are speckled with small whitish spots.

The buds are flattened, triangular, lie against the branch,

and are attached to not very prominent stems.

The leaves are about the same shape & have the same denticulation as those of the Epine d'été. When the tree is grafted on the quince tree, they're much smaller. They're two inches four *lignes* long, twenty *lignes* wide, and slightly ruffled on the margins. The veins are almost as prominent on top of the leaf as they are underneath it. The petioles are about seven or eight *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are long, pointed at both ends, wrinkled & bent inward.

The fruit is medium sized, oblong, twenty-six *lignes* in diameter & two inches six *lignes* long. Sometimes it's bigger, sometimes smaller, depending on the soil in which the pear tree is planted & the stock on which it's grafted. It's not very flattened at the top & the eye there is set almost flush with the fruit. The end near the stalk gradually decreases in size & comes to a very blunt point. The stalk is quite thick, ten to fourteen *lignes* long, and a bit fleshy at its origin. Sometimes it inserts flush with the fruit and sometimes between several creases & small bumps that form an indentation at the insertion point. Frequently there's a groove, not very deep but quite noticeable, that runs from the origin of the stalk up to the eye or along most of the length of the fruit. When this pear is attractive & in good condition, it's three inches high by twenty-seven or twenty-eight *lignes* in diameter. It's almost elliptical in shape and comes to a point at the end near the stalk, whose origin is fleshy as though it were an extension of the fruit.

Its skin is smooth, sort of satiny; it's a whitish green that yellows very slightly when the fruit ripens. If the tree is planted in damp or cold ground or in a poor exposure, the skin of the fruit stays very green & never turns yellow at all.

It's then a poor quality pear, as la Quintinye has well noted.

Its flesh is soft, delicate, & very nicely buttery.

The juice is sweet, musky, & has a very pleasant flavor.

The seeds are light brown, very long, and quite full.

This pear ripens in November & sometimes keeps until the end of January. It's rarely musky, but nonetheless if it's in good condition, it's an extremely good fruit.

LXV. *PEAR TREE, with medium-sized somewhat oval white autumn fruit.*

AMBRETTE. (*Pl. XXXI.*) [*Translator's note*: an ancient dessert pear, so-named because its scent is similar to that of the Ambrette, or musk mallow flower. It may also be the Myrapia, the aromatic myrrh- or musk pear, mentioned by Pliny.

This tree has thorny branches. It's grafted on wild stock & even better on the quince tree. It prefers warm & dry soil & a good exposure in open ground as a tall standard tree rather than on espalier or as a bush tree. Rainy, damp, and cold years make its fruit much less desirable. So cultivating it requires the same care as that for the one above.

The shoots are short, well rounded & straight, a light gray-green on the shaded side and flax-gray on the side in the sun.

The buds are big, rounded, very sharply pointed, free of the branch and held on stems that are not very prominent.

The leaves are average-sized, two inches eight *lignes* long, twenty-two *lignes* wide and are not denticulate. They fold along the central vein & it curves downward. The petioles are nineteen *lignes* long.

The flowers are fourteen *lignes* in diameter. The petals are oval and concave spoonlike. The tips of the stamens are light purple mingled with white.

The fruit is medium-sized. It has a pleasing shape; it's rounded and it gets a little smaller near the stalk. The latter is thick, nine *lignes* long, and inserts into a very small indentation

whose edges are raised with several small bumps. The top is quite rounded & the eye is set in a not very deep recess bordered by several small bumps. It's two inches in diameter & twenty-five *lignes* high.

Its skin is whitish when it's grown in loose soil & gray in heavy or damp soil.

Its flesh is somewhat greenish, delicate and soft.

The juice is sweet, flavorful, & delicious in seasons & in areas that are favorable for this fruit.

The seeds are black & their compartments are quite wide.

It ripens in November, December, January, & February.

LXVI. *PEAR TREE, with medium-sized, oval, somewhat golden yellow autumn fruit.*

ECHASSERY. BEZI de Chassery. (*Pl. XXXII.*)

This is a beautiful and fruitful tree. It readily produces fruit which it bears in clusters. It's grafted on wild stock & on quince trees. Loose & gentle soil is best suited to it & results in much better fruit than does heavy, damp or cold ground.

The shoots are slender, bent at each node, very spotted, gray on one side and gray-green on the other.

The buds are of average size, longish, pointed, free of the branch and held on stems that are small & not very extended.

The leaves are long & narrow, slightly folded along the central vein and coarsely & not very deeply denticulate. They're seventeen *lignes* wide and three inches long. The petiole is eighteen *lignes* long.

The flower is sixteen *lignes* in diameter. The petals are oblong, terminate in a ruffled point, and are not very concave.

The fruit is medium-sized, round to oval, smaller toward the stalk. It looks quite a lot like the Ambrette.

Sometimes it's shaped like a lemon. It's two inches in diameter & two inches five *lignes* high (often it's bigger than that). At times its diameter & height are almost equal. The top is very rounded; the eye is set there flush with the fruit. The stalk is thick, eight to fifteen *lignes* long, and inserts into a small cavity usually bordered by several small bumps.

Its skin is whitish, lighter than that of the Ambrette. It turns yellowish when the fruit ripens.

Its flesh is soft, buttery & delicate.

The juice is sweet, musky, and has a very pleasant flavor.

The seeds are brown.

This pear ripens in November, December, & January. It's a delicious fruit when it's in good condition.

LXVII. *PEAR TREE, with medium-sized, rough, somewhat oval greenish autumn fruit.*

> MERVEILLE d'hiver. PETIT OIN. [*Translator's note*: a pear that originated in Germany.] (*Pl. XXXIII.*)

This is a beautiful pear tree when grafted on wild stock, but it does poorly on quince trees. It's very fruitful.

The shoots are slender, long, not very bent at the nodes, green, and very speckled with gray spots. The tips are slightly reddish on the side in the sun.

The buds are triangular, slightly flattened, not very pointed and free of the branch. The stems are not very raised.

The leaves are small, thirty-four *lignes* long and eighteen *lignes* wide. They're ruffled on the margins, which are not smooth even though no denticulation is visible. Some leaves are folded along the central vein but most are in a boat shape. The petioles are twenty-three *lignes* long. The medium-sized leaves are almost oval and diminish in width almost equally at both ends. Their petioles are only thirteen to fifteen *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are quite narrow and are pointed at both ends.

The fruit is medium-sized and not very uniform in shape. Sometimes it resembles the two preceding ones, sometimes it's close to a Bergamot. Usually it's quite rounded and twenty-six *lignes* in diameter by twenty-eight *lignes* high. The top is round & the large eye is set flush with the fruit. The stalk is short, slender, slightly curved & inserts into a small indentation. At times it's quite long & inserts flush with the fruit.

Its skin is greenish, a bit rough & often is dotted with small bumps. It tends to be a bit yellow when the fruit ripens.

It has soft, very delicate buttery flesh. It's not gritty & it leaves no residue.

The juice is sweet, musky, & has a very pleasant flavor.

This pear ripens in November. To get delicious pears, the tree must be planted in ground which is neither cold nor damp, nor in a poor exposure.

LXVIII. *PEAR TREE, with medium-sized smooth oblong green autumn fruit.*

SUCRÉ-VERT. (*Pl. XXXIV.*)

This is a vigorous pear tree. It's grafted on wild stock & on the quince tree. It's very fruitful & bears its fruit in clusters.

The shoots are thick, slightly bent at each node, speckled, very deep red-brown, and green beneath the stems. Sometimes they're gray when the tree is grafted on wild stock.

The buds are small, flat, triangular and lie against the branch. Their stems are flat.

The leaves are very large, oblong,

four inches two *lignes* long, two inches eight *lignes* wide, and folded along the central vein. The midrib curves downward. There are some teeth on the margins that are not very apparent. The petioles are quite thick and twenty-two *lignes* long.

The flowers are beautiful and eighteen *lignes* in diameter. The petals are almost round and not very concave spoonlike. The tips of the stamens are bright red.

The fruit is medium-sized, oblong, and somewhat cylindrical. It's twenty-five *lignes* in diameter by twenty-seven high. Sometimes its diameter is almost the same as its height. The end with the eye is not very flattened & the eye is set in a not very deep indentation. The end near the stalk doesn't decrease much in size. The stalk, quite thick & six to eight *lignes* long, inserts into a small cavity surrounded by several creases. It's often almost flush with the fruit.

Its skin is smooth & always green.

Its flesh is very buttery. Usually there are a few granules around the seeds.

The juice is very sweet & has a pleasant flavor.

This pear ripens about the end of October.

LXIX. *PEAR TREE, with large, nearly apple-shaped green to ash-gray winter fruit.*

POIRE de Prêtre.

This is a big pear, twenty-eight *lignes* in diameter by twenty-seven *lignes* high. It's almost round, slightly flattened at the top & at the stalk and shaped much like an apple. The eye is set in a wide & not very deep recess. The stalk, quite full & about nine *lignes* long, inserts into a deeper cavity.

Its skin is quite thin, almost the same color as the gray Messire-Jean with gray-white spots.

Its flesh is white, semi-crisp, & quite delicate. There are a few granules next to the seeds.

The juice has a slightly tart flavor which is not unpleasant.

The seeds are very brown, quite full, and not very elongated. Their compartments are large.

The fruit ripens in February & is notable in that season.

LXX. *PEAR TREE, with large, turbinate, partly green, partly red very late fruit.*

POIRE à Gobert.

This is a large, top-shaped fruit. It's thirty *lignes* in diameter by thirty-three *lignes* high. The eye, which isn't big, is set in a not very deep indentation. The stalk is quite thick, average in length, and inserts flush with the fruit.

Its skin is a striking red on the side in the sun and green on the shaded side. It turns yellow when the fruit ripens.

Its flesh is very white, semi crisp, and musky.

The seeds usually abort & their compartments are small.

The fruit keeps until June, which is an advantage.

LXXI. *PEAR TREE, with large pyriform smooth winter fruit, partly lemon yellow, partly a pleasant red.*

ROYALE d'hiver. [*Translator's note*: a pear possibly brought from Constantinople for Louis XIV.] (*Pl. XXXV.*)

This pear tree is grafted on wild stock & on the quince tree. On the quince tree the graft forms a thick swelling at its insertion point covering the stock that's too weak for such a vigorous tree.

The shoots are straight, stout, yellow-green on the side in the shade, flax gray on the side in the sun, and flecked with large spots. On quince trees they're usually reddish.

The buds are big, rounded, long, very sharply pointed, a deep red-brown, and very free of the branch. Their stems are thick near the tip of the shoot but flat along the rest of it.

The leaves are broad & beautiful, three inches three *lignes* long and two inches two *lignes* wide. They terminate in a point that's narrower at the stalk than it is at the other end. They're folded into a boat-shape and are attached to the branch by a petiole seven to nine *lignes* long. The denticulation on the margins is very fine, very sharp, & not very deep.

The flowers are eighteen *lignes* in diameter. The petals are wide, becoming narrower near the tip and are concave spoonlike.

The fruit is large, two inches seven *lignes* in diameter by two inches ten *lignes* high. Frequently there are some that are very big, three inches in diameter & three inches three *lignes* high. It's pyriform, very much enlarged at its top end where there's a large cavity with an eye, usually small, set at the bottom. At the end near the stalk the fruit is still quite large & it doesn't terminate in a narrow point. The stalk is brown, frequently recurved, thicker at its end than at its origin, thirteen *lignes,* & sometimes two inches, long.

Its skin is smooth & delicate, a beautiful red on the side in the sun and yellow on the shaded side when the fruit is ripe. Sometimes there are brown spots on the red & tan ones on the yellow.

Its flesh is semi-buttery, tender, very delicate, not gritty, and slightly yellowish.

The juice is very sweet in areas that are warm & dry.

The seeds usually are very small and most often fail to develop.

This pear ripens in December, January, & February. It does better in open ground than on espalier.

LXXII. *PEAR TREE with large pyriform late fruit, partly ash-colored, partly red.*

MUSCAT l'Alleman. (*Pl. XXXVI.*)

This pear tree is very similar to the preceding one. It's vigorous & is grafted on wild stock & on quince trees.

The shoots are long, of medium thickness, quite straight, yellow-green on the side in the shade, light brown on the side in the sun, and speckled with tiny spots. They're usually reddish when the tree is grafted on the quince tree.

The buds are thick, rounded, long, pointed, and very free of the branch. Their stems are prominent.

The leaves are large, round, two inches ten *lignes* long, & two inches four *lignes* wide. The midrib bends downward near the tip of the leaf. The denticulation along the margins is very sharp, not very deep, and is barely discernible except at the tip of the leaf. The petioles are eight *lignes* long.

The flowers are big, nineteen *lignes* in diameter. The petals are wide, concave spoonlike, and ruffled on the margins.

The fruit looks a lot like the winter Royale. It's not as big; it's usually a bit more enlarged at the top end. The eye is very small and is set in a not very deep indentation. This pear is more pyriform in shape than the winter Royale.

Its skin is gray on the shaded side & red on the side in the sun.

Its flesh is buttery, tender, and slightly yellowish.

The juice is musky & more flavorful than that of the Royale.

The seeds are brown, long, & full.

This pear ripens in March & April & sometimes keeps until May. So it's much later than the Royale d'hiver. Several gardeners confuse it with that one.

LXXIII. *PEAR TREE with large, long green autumn fruit.*

VERTE-LONGUE. MOUILLE-BOUCHE.

This is a very fruitful pear tree that's grafted on wild stock & on the quince tree. It does better on the wild stock. It likes loose & warm soil.

The shoots are of average length & thickness. They're bent at each node, greenish on the shaded side, reddish on the sun side, and covered with a thin, pearl gray epidermis.

The buds are thick, rounded, quite long, pointed, free of the branch and held by a stout stem.

The leaves are almost round, two inches eight *lignes* long and two inches one *ligne* wide. The denticulation on the margins is large & not very deep. The petiole is nine *lignes* long. The middle leaves are oblong, more finely & very lightly denticulate. Their stalks are eighteen *lignes* long.

The flowers are fifteen *lignes* in diameter and fully open. The petals are rounded and flat. The tips of the stamens are big. The sections of the calyx are very long & narrow. Many of the flowers have seven petals.

The fruit is big. It's two inches six *lignes* in diameter & three inches high. It's long, sometimes pyriform and sometimes turbinate. The most enlarged part is about midway along its length. It gets smaller at the top end, where the eye is set in the center of a small indentation. It diminishes in size even more at the end near the stalk. The stalk is slender, two inches nine *lignes* long, & inserts flush with the fruit, which terminates unevenly in a blunt point.

Its skin is green, even when the fruit is ripe.

Its flesh is very tender, fine, delicate, white, and not gritty. But it softens quickly.

The juice is plentiful, sweet, sugary, and has a most pleasant fragrance & flavor.

The seeds are long, black, & very full.

This pear ripens at the beginning of October. Its stalk is not firmly attached to the branch, & the slightest breeze easily detaches it.

LXXIV. *PEAR TREE with large, long green autumn fruit streaked with yellow bands.*

VERTE-LONGUE panachée, ou Suisse. (*Pl. XXXVII.*)

The variegated Verte-longue is a variety of the preceding one & usually is not as large.

The shoots are streaked with green & yellow.

When this pear tree is grafted on a quince tree or planted in soil that's too dry, it's quite normal to find variegated leaves on it.

The skin of this pear is streaked lengthwise with yellow & green & is speckled with brown or with dark green. Sometimes the yellow stripes are lightly tinged with red on the side in the sun.

As for all the rest of it, there's no difference at all from the common Verte-longue.

This pear has been known only for about ninety years. Merlet says that he discovered & publicized the first one.

LXXV. *PEAR TREE with large, pointed-oval ash-gray (or green or red) autumn fruit.*

BEURRÉ. [BUTTER PEAR]. (*Pl. XXXVIII.*)

This is a very fruitful pear tree and it adapts well to all kinds of soil and to all styles, on espalier, bush tree, fan-shape, in open ground, & in almost all exposures. It's grafted on wild stock & on the quince tree.

The shoots are stout, bent at each node, and speckled with very tiny spots. They're a reddish to light brown on the sun side and covered with a gray epidermis on the shaded side.

The buds are large at their base, not very elongated, free of the branch, and held on thick stems.

The leaves are large, oblong, wide & rounded near the stalk, unevenly & not very deeply denticulate. The midrib curves downward. The stalks are eighteen *lignes* long. The leaves are three inches eight *lignes* long & two inches six *lignes* wide.

The flowers are fifteen-&-a-half *lignes* in diameter. The petals are seven *lignes* long and four *lignes* wide. They narrow considerably near the calyx. Many flowers have six & seven petals.

The fruit is very big, sometimes two inches eleven *lignes* in diameter & three inches nine *lignes* high. It's elliptical or oval-oblong in shape & pointed. It decreases uniformly & not noticeably in size toward the stalk where it comes to a point. The stalk is an inch long, somewhat plump at its origin, thick at its other end and inserts there flush with the fruit. The top is rounded as it gets smaller. The eye is quite deeply indented there in a wide & smooth recess.

Its skin is thin, smooth, green or gray or spotted with red on the side in the sun. These color distinctions, the green, gray, or red, do not represent

three different varieties of the Beurré, or the Amboise or Isambert as is commonly thought. They're one & the same Beurré whose color varies with soil, exposure, cultivation, grafting stock, &c. The young & vigorous trees & those grafted on wild stock usually produce gray fruit. Trees grafted on quince & average in vigor yield the green ones. Those in decline or planted in soil that's too dry & in a very warm exposure produce the red ones. Sometimes the same tree will bear all three colors on branches of different degrees of strength or frailty that correspond to the formation of these differences in the color of the fruit.

Its flesh is fine, delicate, tender, & very buttery without ever becoming mealy.

The juice is very plentiful, sweet, and enhanced with a very subtle, delicate tartness.

The seeds are small, brown, and very pointed.

This pear ripens toward the end of September. Some regard it as the finest of all pears.

LXXVI. *PEAR TREE with medium-sized long, pointed, ovoid, smooth ash-gray to green summer fruit.*

ANGLETERRE. BEURRÉ d'Angleterre. (*Pl. XXXIX.*)

This pear is grafted only on wild stock & it never does well on quince trees. It rarely fails to yield fruit.

The shoots are long, straight, gray-green and lightly tinged with reddish streaks on the side in the sun and flecked with very tiny spots.

The buds are quite thick, short, rounded, blunt, and very free of the branch. Their stems are stout & are very full both above & below the eye.

The leaves are medium-sized, two inches seven *lignes* long & two inches wide. The midrib bends downward. The denticulation on the margins is large & not very deep. It's finer on the middle leaves. The petiole is ten *lignes* long.

The flowers are thirteen *lignes* in diameter. The petals are much wider near the calyx than they are at the other end. The tips of the stamens are light purple.

The fruit is medium-sized. It's two inches in diameter & two inches eight *lignes* high. It has an oblong oval shape and is pointed near the stalk which is thick, curved, thirteen to fifteen *lignes* long and inserts flush with the fruit. This pear is similar in shape to the preceding one.

Its skin is smooth and gray-green spotted with red.

Its flesh is tender, semi-buttery, and juicy. But it turns mushy quickly.

The juice is plentiful & has a pleasant enhanced flavor.

This pear ripens in September. It's sought after in years when there's a shortage of good pears in that season.

LXXVII. *PEAR TREE with medium-sized long pyriform lemon-yellow winter fruit scattered over with yellow spots.*

ANGLETERRE d'hiver.

The winter Angleterre is a medium-sized pear, elongated-pyriform in shape, about two inches three *lignes* in diameter by three inches two or three *lignes* high. It’s very rounded at the top where the quite open eye is situated in the middle of a flattening or wide indentation that’s smooth and not very concave. The other end extends uniformly (sometimes it looks a little like a gourd) into a not very truncate point

where the stalk, eight to twelve *lignes* long, inserts obliquely at the tip.

Its skin is smooth, lemon-yellow, speckled & covered almost entirely with a yellow, wood-color.

Its flesh is very white and very buttery; it leaves no residue & is not gritty. As soon as it ripens, it becomes a bit mealy & soon gets soft.

The juice isn't very plentiful nor flavorful, but it's pleasant & very sweet.

The seeds are dark brown, not very plump, longish and very pointed. Their compartments are narrow & the axis of the fruit is quite hollow.

The fruit matures in December, January & February.

LXXVIII. *PEAR TREE with large, somewhat oval winter fruit, lemon yellow on one side, beautiful red on the other.*

BEZI de Chaumontel. BEURRÉ d'hiver. (*Pl. XL.*)

This tree is grafted on wild stock & on quince trees.

The shoots are small, slender, spare, grooved, sort of wrinkled and bent at each node. They're light reddish on the side in the sun, covered with a thin, pearl-gray epidermis on the shaded side and are not very spotted.

The buds are thick at the base, long and very pointed. Their stems are broad, stout, & wrinkled.

The leaves are small, two inches three *lignes* long, twenty *lignes* wide, uniformly & quite deeply denticulate on the margins which form waves or sinuous undulations. The midrib curves downward & forms a large bend in the leaf at the tip & frequently at the stalk which is about four of five *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals

are racket-shaped. They're much longer than they are wide, slightly concave & ruffled at the ends.

The fruit is big and varies a great deal in size & shape. Some are two inches eight *lignes* in diameter by three inches five *lignes* high; others are two inches eight *lignes* in diameter by two inches ten *lignes* high. There are others that are the same in diameter and height. Some are flattened lengthwise & are two inches nine *lignes* in diameter in one direction, two inches four *lignes* in the other and three inches five *lignes* high. The eye is set in a deep funnel-shaped recess that's often compressed or oval-shaped and bordered with bumps that normally extend down as far as the most enlarged part of the fruit & form ridges there that make the top of the fruit seem sort of crooked. From its greatest circumference, which is slightly nearer to the eye than to the stalk, the fruit decreases considerably in size in the direction of the stalk, sometimes uniformly, sometimes unevenly, sometimes terminating in a sharp point and at other times in a very blunt point. As a result, some of the fruits are pyriform and others look somewhat gourd-like. Most of them are of indeterminate shape. The stalk is thick at the end and short, only four to six *lignes* long. Sometimes it attaches flush with the fruit, at other times it inserts into a small indentation edged with small bumps, and at yet other times between two or three bumps without any indentation.

The color of its skin is also variable. In loose soil, when the tree is grafted on a quince tree, it's lemon yellow on the shaded side and a beautiful bright red on the side in the sun. Sometimes it's yellowish speckled with gray and has no red at all. In pure & substantial soil it's the same color as the Crasanne.

Its flesh is semi-buttery, tender & very good. It often has several very small granules. In pure & substantial soil

it's very tender.

The juice is sweet, flavorful & delicious.

The seeds are brown. Some are broad & flat and others are small & very rounded. Most of them fail to develop.

The time that the fruit matures is variable as well. Usually it keeps until the end of February. In 1764 not a single one remained at the beginning of January.

Merlet likens the Bezi de Chaumontel to the Beurré. If these two pears are not exactly alike, they at least have a family resemblance. This along with their color variations & the many common features of the Beurré & the Bezi de Chaumontel trees, allows the Bezi de Chaumontel to be thought of as a variety of the Beurré. One must take care to catch it in time and to pick it when it's just ripe.

The pears shown in the figure are from Chaumontel itself & were given to me by the landlord who owned the first Bezi de Chaumontel pear tree. It's still there in the same spot where it grew from seed about a hundred years ago. The trunk and most of the large branches now are hollow. It's seventeen feet nine inches tall. It's three feet eight-&-a-half inches in circumference where the roots begin, & three feet two inches where the branches begin. It's still vigorous & fruitful in its old age. This year, 1765, it yielded many extremely beautiful pears. They're oblong, enlarged at the middle, becoming smaller toward the top & much more so toward the stalk where they terminate in a very blunt point. They're two inches nine *lignes* in diameter & three inches high.

This pear gets to be much bigger & more strongly colored on espalier than it does when grown in the open. Although this year's drought had been exceptionally long & severe, I measured some pears

on an espalier at Chaumontel that were three inches four *lignes* in diameter & three inches seven *lignes* high. They had the brightest and most beautiful color.

LXXIX. *PEAR TREE with large, somewhat oval summer fruit, partly green, partly dark red and streaked with paler red stripes.*

ORANGE tulipée. POIRE aux mouches. (*Pl. XLI.*)

This pear tree is grafted on wild stock & on quince trees.

The shoots are short, very thick, bent at each bud and a very deep purple or wine-like brown.

The buds are big, not very elongated, pointed and not very free of the branch. Their stems are very thick.

The leaves are average-sized, almost oval, two inches ten *lignes* long and two inches wide. They're finely but indiscernibly & not very evenly denticulate. The midrib curves downward making a fold along the central vein, sometimes along the whole leaf, sometimes only at the tip. The petioles are sixteen *lignes* long.

The flowers are large & wide open. They're seventeen *lignes* in diameter. The petals are almost round. The tips of the stamens are very big & are colored light purple.

The fruit is big, two inches six *lignes* in diameter & two inches eleven *lignes* high. It's oval-shaped and comes to a point near the stalk, similar to the Beurré or the Doyenné, depending on the extent that its height exceeds its diameter. The stalk is short & thick, often not more than six *lignes* long. It inserts into an indentation bordered with some bumps that are much smaller than those on the Doyenné. The eye is set in the bottom of quite a large & deep recess.

The skin is green on the shaded side and red-brown on the side in the sun. Between the green & red-brown some red lines or streaks are evident. It's spotted & dappled with gray all over which makes it look rather uneven.

Its flesh is semi-crisp, quite delicate & succulent.
The juice has quite a nice flavor though sometimes it's a little tart.
The seeds are long & slender.
This pear ripens at the beginning of September.

LXXX. *PEAR TREE with small, almost pyriform summer fruit, a rich & beautiful red on one side and lemon-yellow marked with reddish streaks on the other.*

BELLISSIME d'été. SUPREME. (*Pl. XLII.*)

This is a vigorous tree; it's grafted on wild stock & on the quince tree.

The shoots are short, thick, quite straight, reddish brown shading to deep purple and flecked with very tiny, almost indiscernible spots.

The buds are flat, triangular, and not very free of the branch. Their stems are flat.

The leaves are quite large & beautiful. The midrib bends downward slightly, especially at the tip. The denticulation is barely discernible. It's fine on some leaves but widely spaced on others. The leaves are three inches long and two inches one *ligne* wide. The petioles are twenty-two *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are long & narrow. They're wider near the unguis than they are at the other end.

The fruit is small, only twenty *lignes* in diameter by twenty-four *lignes* high. The top is very round. The eye is quite large and lies even with the fruit or in the middle of a flattening rather than in an indentation. The other end diminishes considerably in size though it doesn't terminate in a sharp point; hence this pear is nearly pyriform. The stalk,

ten to twelve *lignes* long, is thick, red on the side in the sun, yellow or very light green on the shaded side. It inserts at a slant & almost flush with the fruit.

Its skin is smooth & shiny and a very beautiful deep red on the side in the sun. The opposite side is light green & turns lemon yellow streaked with pale red when it's ripe. The red is completely speckled with very tiny yellow spots. It lightens up closer to the yellow side & forms small streaks or lines. Barely a quarter of the skin is yellow; all the rest is red.

Its flesh is semi-buttery. It's inclined to get mealy & to soften rapidly.

The juice is sweet with quite a nice though not very accented flavor.

The seeds are black and frequently abort.

This pear ripens in July. It's one of the most beautiful of that season. It's best picked before it ripens.

I'm not familiar with Merlet's Suprême. His Bellissime is a medium-sized pear, thirty *lignes* high by twenty-six *lignes* in diameter. If the point near the stalk were less blunt, it would look a lot like the Beurré, at least in that part. When there's less of a difference between its diameter & its height, its shape is close to that of the Doyenné. It's flattened at the top. The eye, often sort of wrinkled, is set in a not very concave indentation with ridges around it. The other end is a truncate point. The stalk is quite full and is the same color as the fruit. It's about thirteen *lignes* long and is often marked with bumps at its origin. It inserts into a very small indentation. The skin of the fruit is very smooth, streaked with red on the side in the sun, green on the shaded side, & it turns yellow as the fruit ripens. The juice is slightly accented with a musky flavor. It ripens at the same time as the preceding one.

LXXXI. *PEAR TREE with large, oblong lemon yellow autumn fruit.*

DOYENNÉ. BEURRÉ blanc. S. MICHEL. BONNE-ENTE. (*Pl. XLIII.*)

This is a vigorous pear tree, & it's grafted on wild stock & on the quince tree. It's very fruitful.

The shoots are thick & strong, bent at each node, and are light gray on wild stock. On quince trees they're red & have some green spots below the buds and are speckled.

The buds are rounded, thick at the base, short, pointed and very free of the branch. Their stems are very thick & swollen.

The leaves are big & beautiful. They're three inches three *lignes* long, two inches three *lignes* wide, uniformly & not very deeply denticulate (the middle leaves are finely denticulate) and they bend downward. The petioles are fifteen *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are longish & are concave like a spoon.

The fruit is very large, two inches eleven *lignes* high and the same in diameter. More generally the diameter is two inches nine *lignes* & the height is two inches eleven *lignes.* It's almost round in shape. The eye is small & is set in a not very wide & not very deep indentation. The stalk is very thick, six *lignes* long, and inserts into the bottom of a narrow cavity frequently bordered with bumps & quite deep creases. At times this pear takes on a slightly oblong shape. Its fullest part is at a third of its length from the top. The remaining two thirds continue to diminish in size toward the stalk with the result that that end is only fourteen or fifteen *lignes* in diameter.

Its skin is greenish and turns lemon yellow on ripening. On espalier it becomes bright red on the side toward the sun.

Its flesh is very buttery & very good in dry years & when it hasn't become mealy from being overripe.

The juice is very sugary & sweet. Sometimes it's enhanced with a lot of flavor.

Some of the seeds are wide, others are long.

This pear ripens in October. It's a very beautiful fruit. It's hard to catch it just when it's at its best because it passes that stage very quickly.

LXXXII. *PEAR TREE with large, rounded-turbinate autumn fruit, deep green turning golden yellow.*

BEZI de la Motte. (*Pl. XLIV. Fig. 5.*)

This pear tree has thorny branches. It's grafted on wild stock & on the quince tree.

The shoots are of average strength, very spotted and bent at each bud. They're light gray tending somewhat to green on the side in the shade and gray with a very light reddish tinge on the side in the sun.

The buds are short, triangular, almost flat, and not very free of the branch. Their stems aren't very prominent.

The leaves are long & narrow, only twenty *lignes* wide by three inches two *lignes* long. They terminate in a very sharp point. On some of them the midrib curves downward; on others the margins are ruffled and wavy. Their denticulation is quite delicate & not very deep. The petioles are seven *lignes* long. The smaller leaves look like the very small leaves on willow trees.

The flowers are fifteen *lignes* in diameter. Their petals are long & concave like a spoon.

The fruit is big and very enlarged at the top end. If the other end, which diminishes considerably in size,

were to come to a point, it would be turbinate in shape. It often looks a lot like the Crasanne. It's twenty-eight *lignes* in diameter & the same in height. The eye is set in a smooth and not very deep indentation. The stalk, thick and straight, five or six *lignes* long, inserts into an indentation with practically smooth edges. At times this fruit is rather oblong, fuller at the end near the stalk, & and in that case it's shaped more like the Doyenné. On vigorous trees it's not unusual to obtain fruit that's three inches in diameter by three-&-a-half inches high. These large pears usually are gourd-shaped at the end near the stalk. The other end is slightly elongated, & the eye is situated flush with a quite prominent bump or elevation.

Its skin is dark green and very speckled with extremely tiny gray spots. It turns somewhat yellow when the fruit is ripe.

Its flesh is very white, tender, and has no granules.

The juice is sweet & extremely good.

The seeds are large, black, oblong, flat, and pointed. The axis of the fruit is hollow & the seed compartments are large.

The fruit ripens in October & November. This tree thrives only in open ground.

LXXXIII. *PEAR TREE with medium-sized rather long, smooth, lemon yellow autumn fruit.*

BEZI de Montigny. (*Pl. XLIV. fig. 6.*)

This tree is grafted on wild stock & on the quince tree.

The shoots are long, of medium thickness, slightly bent at the nodes, green and speckled.

The buds are big, pointed and reddish. They lie against the branch and are attached to thick stems.

The leaves are round, two inches seven *lignes* long, two inches four *lignes* wide, and quite flat. The margins are almost smooth; the denticulation is barely noticeable. The veins

are almost as prominent on top of the leaf as they are underneath it. The petiole is nine *lignes* long.

The flowers are large, very open, and seventeen *lignes* in diameter. The petals are flat and wide at the tips. Some are pointed, others rounded, and yet others are irregularly shaped. The tips of the stamens are big.

The fruit is medium-sized and oblong. It's twenty-five *lignes* in diameter & twenty-eight *lignes* high. Its shape is almost the same as that of the Doyenné. The top is rounded & the eye is situated there in a not very deep indentation. The other end is much smaller. The stalk, eight to ten *lignes* long and very thick at the end, inserts into a cavity that's usually deeper than the one containing the eye.

Its skin is light green & turns a beautiful yellow when the fruit ripens. It's very smooth.

Its flesh is white and not gritty. It's juicier than that of the Doyenné.

The juice is enhanced with a pleasant musky flavor.

The seeds are brown, quite full, and terminate in a sharp point.

The fruit ripens at the end of September or the beginning of October.

LXXXIV. *PEAR TREE with medium-sized smooth, somewhat round green to ash gray autumn fruit.*

DOYENNÉ gris. (*Pl. XLVII. Fig. 1.*)

This pear tree is grafted on wild stock & on the quince tree.

The shoots are slender, straight, pale reddish on the side in the sun, gray-green on the shaded side, and slightly speckled with very tiny spots.

The buds are quite big, somewhat flattened, not very pointed,

and not very free of the branch. Their stems are thick.

The leaves are long & narrow, very finely, uniformly & not very deeply denticulate and often fold along the central vein. They're three inches two *lignes* long and sixteen *lignes* wide. The petioles are twenty-one *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are oval and almost flat. The tips of the stamens are light purple.

The fruit is medium-sized, almost round, two inches three *lignes* in diameter & two inches four *lignes* high. The stalk is thick & five *lignes* long. It inserts into an indentation usually bordered by quite large bumps. The eye, small & closed up, is set in a not very deep indentation.

Its skin is quite smooth & gray even when the fruit is ripe.

Its flesh is buttery, tender, and not likely to turn mealy.

The juice is very sweet & has a nicer flavor than that of the yellow Doyenné.

The seeds are small & light brown.

This pear ripens at the beginning of November, usually about a month after the other Doyenné, which is much inferior to it in quality. At first I'd thought of it only in the sense that the gray Messire-Jean compares with the golden Messire-Jean, or that the gray Beurré compares to the other Beurrés, & I had thought that the differences with the yellow Doyenné arose merely from the type of soil, the rootstock, or from cultivation. But I had noticed in Chartreux & in several other gardens that it varied consistently in size, in quality, in ripening time, & that there were quite significant differences between the shoots, buds, and tree leaves with those same parts of the yellow Doyenné pear tree. The gray Doyenné pear tree therefore must be

a very distinct variety of the yellow Doyenné. It shares almost nothing in common with it except the shape of its fruit.

LXXXV. *PEAR TREE with medium-sized, long, very slightly gourd-shaped, partly lemon yellow partly deep red autumn fruit.*

FRANCHIPANNE. (*Pl. XLVII. Fig. 2.*)

This is a very vigorous pear tree. It's grafted on wild stock & on the quince tree.

The shoots are straight, stout, very speckled, gray-green on the side in the shade with a very light reddish tinge on the side in the sun.

The buds are short, pointed, very thick at the base and free of the branch. The stems are flat.

The leaves are very large, four inches long, three inches four *lignes* wide, almost heart-shaped, unevenly & barely noticeably denticulate. Some are flat, others boat-shaped; they're thick & substantial and are attached by petioles that are full & an inch long.

The flowers are sixteen *lignes* in diameter. The petals are flat and almost oval. Most of them are edged with red; some are almost entirely red. Many of the flowers have six petals.

The fruit is medium-sized, two inches nine *lignes* high by twenty-five *lignes* in diameter. It's long and flecked with many very tiny spots. The eye is quite large and is set in an indentation that's not very deep & is bordered with small creases that don't quite come up to its edges. The top of the fruit decreases in size up to the rim of the indentation. The other part of the fruit, near the stalk, diminishes in size much more & terminates in a blunt or obliquely truncated point, with one side much higher than the other. The stalk, thick at the end & eleven *lignes* long, inserts into a small indentation.

The skin is smooth and a bit oily to the touch.

It's a beautiful light yellow, almost lemon colored, on the shaded side & bright red on the side in the sun.

Its flesh is semi-soft, tasty, & leaves no residue.

The juice is sweet & sugary and has a particular flavor comparable to that of frangipane.

The seeds are quite big, pointed & very full.

This pear ripens at the end of October. It's most attractive & its flavor is not unpleasant.

LXXXVI. *PEAR TREE with large autumn fruit compressed at its diameter, hazel-colored and pimply.*

JALOUSIE. (*Pl. XLVII. Fig. 3.*)

This tree is grafted only on wild stock. On the quince tree it will decline & die in a few years.

The shoots are long, slender, very slightly bent at the nodes, speckled and have a light reddish tinge.

The buds are very short, broad at the base and not very free of the branch. Their stems are thick & enlarged above & below the eyes.

The leaves are big & beautiful, oblong, often folded along the central vein, and finely, evenly, & not very deeply denticulate. They're three inches six *lignes* long & two inches four *lignes* wide. The petiole is seven *lignes* long.

The flowers are beautiful, very open and eighteen *lignes* in diameter. Their petals are oval and flat. The tips of the stamens are deep purple.

The fruit is big and flattened along its length. In one dimension its diameter is two inches ten *lignes* and in the other two inches seven *lignes*. It's two inches eleven *lignes* high. The most enlarged part is just about halfway along its height.

It diminishes a little in size toward the top, where the small eye is set in a narrow recess bordered by several quite prominent bumps. The part near the stalk diminishes abruptly and substantially in size & terminates in a blunt point where the inch-long stalk inserts into a small indentation.

Its skin is hazel-colored, almost like that of the Martin-sec. It's slightly reddish on the side in the sun, stippled & sort of seeded with very tiny rounded nubs that are both visible & palpable.

Its flesh is very buttery when the fruit has been picked while it's still green. If it's allowed to ripen on the tree it goes soft very quickly.

The juice is plentiful, sweet, flavorful and delicious.

The seeds are longish & very full.

This pear ripens at the end of October.

LXXXVII. *PEAR TREE with very large truncate-pyramidal winter fruit, partly lemon yellow, partly pale red.*

BON-CHRÉTIEN d'hiver [*Translator's note:* the Bartlett pear]. (*Pl. XLV.*)

This pear tree is grafted on wild stock & on the quince tree. If it's planted on espalier facing south, it must be grafted on wild stock, which is more vigorous and more resistant to tiger beetles that do a lot of damage to pear trees on espalier & especially to this one. But it will be slow to set fruit, & it generally yields fruit that's smaller, less well formed, and poorer in quality. It's better to graft it on the quince tree & to plant it on espalier facing west where it will take on quite a bit of color, or as a bush or a fan tree. In this climate it couldn't thrive in open ground unless it's in a very protected garden & yet has good exposure.

The shoots are short, stout, straight, light gray, speckled with indistinct spots, and very flattened below the stems.

The buds are big, brown, elongated, pointed, and free of the branch.

The stems are very broad & not very elevated.

The leaves are medium-sized, oblong, and terminate in a point. Some are finely & not very deeply denticulate; others have only a few teeth near the tip. The margins form large undulations. The petioles are two inches in length & often are longer.

The flowers are fifteen *lignes* in diameter. Their petals are almost round and concave spoonlike. Some have a light red color on the margins. The tips of the stamens are a beautiful bright purple.

The fruit is very large. Some are pyriform, others look like a gourd. Most are shaped like a truncated pyramid. The top end is very much enlarged. The eye is set in a wide & deep cavity that's often oval or compressed. It's bordered with bumps that extend along part of the fruit & form ridges on it; as a result it's totally angular. The end near the stalk diminishes considerably in size without coming to a point. It's obliquely truncate. The stalk usually is fifteen *lignes* long & somewhat plump at its origin. It inserts into a cavity whose edges are elevated with bumps or ridges. Some of the fruits are up to four inches in diameter by six inches high.

Its skin is delicate. On the shaded side it's light yellow bordering on green & a striking red flesh-color on the side in the sun.

Its flesh is delicate & tender, although crisp.

The juice is quite plentiful, sweet, sugary & even a little fragrant or winelike.

This fruit starts to ripen in January & lasts until the spring. A completely ripe Bartlett pear in good condition can be kept for a month without spoiling.

Some of these pears have coarse & gritty flesh; others have rough skin. Still others are flat,

rounded or poorly formed. There are some that are yellow & very colorful before they're picked; others always stay green. And there are others that have no seeds, &c. All of these differences don't at all mean that the fruits are different varieties. They're only due to differences in soil, cultivation, the rootstock, exposure, age, strength, &c. in trees that are more sensitive to all of these influences than are most other pear trees. An old Bartlett pear tree that's been well cared for in good soil and in a good exposure and that's remained green & vigorous in its old age will yield very big, very beautiful and very fine quality fruit that will take on a beautiful yellow color in a fruit loft & normally will be seedless. This pear tree when grafted on the quince tree yields fruit that's bigger, more colorful & has more delicate flesh than one grafted on wild stock. If the tree deteriorates, the fruit will have no seeds, will turn yellow on the tree, and won't keep well or be of good quality. Even on the same tree with branches of different strengths in different exposures and either fewer or more leaves, &c. one might find ordinary Bartletts, or green ones, golden yellow, long, round ones, Ausch, Vernon, &c.

LXXXVIII. *PEAR TREE with very large truncate-pyramidal smooth winter fruit, partly red, partly lemon yellow to whitish.*

ANGÉLIQUE de Bordeaux. (*Pl. XLVII. Fig. 5.*)

This tree is very delicate & doesn't do at all well grafted on the quince tree. It isn't vigorous even on wild stock.

The shoots are long, of medium thickness, slightly bent at each node, and speckled with very tiny points that aren't very conspicuous. They're green or light gray on wild stock and reddish on the quince tree.

The buds are short, small, pointed, and free of the branch. Their stems are broad & quite thick.

The leaves are remarkable for their length & lack of breadth. They're four inches long

& twenty-one *lignes* wide. They're slightly folded along the central vein & the midrib generally curves downward. A few not very deep teeth are visible on the margins. The petioles are twenty-one *lignes* long.

The flowers are seventeen *lignes* in diameter. The petals are oblong and are wider in the middle than they are at the ends.

The fruit is big and flattened lengthwise. Thus the large diameter is two inches eight *lignes,* & the small diameter is two inches five *lignes.* The fruit is two inches eleven *lignes* high. It's similar in shape to the winter Bartlett. The eye is small and is set at the bottom of a smooth, narrow, and quite deep cavity. The divisions of the calyx rarely remain there until the fruit has reached its full size. The stalk is thick, a bit plump at its origin, and eighteen to twenty *lignes* long. It inserts flush with the fruit. Sometimes it's compressed on one side by a groove or flattening.

Its skin is smooth, sometimes spotted with brown around the eye. It takes on the same colors as the winter Bartlett, but the shaded side is pale yellow, almost whitish.

Its flesh is crisp & becomes tender when completely ripe.

The juice is very sweet & sugary.

The seeds are brown, of average size, and terminate in a long & sharp point.

This pear keeps for a long time. It's very good in warm & in well exposed areas.

LXXXIX. *PEAR TREE with very large, sharply cone-shaped autumn fruit, light yellowish green on one side to bright red on the other.*

BON-CHRÉTIEN [BARTLETT] d' Espagne. (*Pl. XLVI.*)

This pear tree is grafted on wild stock & on the quince tree.

The shoots are longish, slender, dark gray-green, reddish on the side in the sun & at the tip, very speckled, quite straight at the end, and bent where they originate.

The buds are very short & are free of the branch. Their stems are thick.

The leaves are thirty-four *lignes* long, twenty-five *lignes* wide, and bend in different directions. The midrib curves downward at the tip of the leaf. The margins are not very denticulate, and the denticulation is uneven & not very deep. The petioles are about twelve or thirteen *lignes* long.

The flowers are very open and are fifteen *lignes* in diameter. The petals are oval and slightly concave like a spoon. The tips of the stamens are pink.

The fruit is very big, three inches in diameter & four inches high. It has a slightly inclined pyramidal shape & is very slightly truncate at the tip. Beyond its most enlarged part, located about a third the way along its height, the fruit gets smaller toward the top. The eye is small and is set in quite a wide & deep indentation bordered by bumps. Some of them extend as far as the largest diameter of the fruit, others only to much above that, & form ridges that aren't as high as those on the winter Bartlett. Along its remaining two thirds the fruit progressively diminishes in size almost uniformly up to the stalk. The stalk is thirteen *lignes* long & inserts at a slight slant into a narrow & not too deep indentation bordered by several bumps. This pear looks a lot like the winter Bartlett,

but it's more oblong, more pointed, & generally is better shaped.

Its skin is completely speckled with small brown spots. It's a beautiful bright red on the sun side; on the shaded side it's a green that turns pale yellow when the fruit matures.

Its flesh is white, flecked with several greenish spots. It's dry, firm and crisp or tender & very juicy depending on the year & the soil. This fruit prefers gentle, loose dry soil.

The juice is sweet and sugary & has quite a nice flavor when the tree has been planted in good soil in a good exposure & the fruit is fully ripe.

The seeds are long, pointed, quite full, and light brown.

This pear ripens in November & December. One can make more of a case for it than La Quintinye does. At the very least it's one of the most beautiful pears & is very good in compotes; & when it's in good condition it can be eaten fresh.

XC. *PEAR TREE with large, blunt-pyramidal very slightly gourd-shaped smooth yellow summer fruit.*

BON-CHRÉTIEN [BARTLETT] d'été. GRACIOLI. (*Pl. XLVII. Fig. 4.*)

This is a fruitful tree. It's grafted on wild stock & on the quince tree.

The shoots are quite thick and are not bent at the nodes. On trees planted in the open, they curve downward umbrella-like. They're not very spotted, greenish on the side in the shade and a not very deep red-brown on the side in the sun.

The buds are thick, rounded, long, and not very free of the branch. Their stems project very little. The fruiting buds emerge for the most part at the tips of the branches, so this pear tree must be pruned carefully.

The leaves are big, beautiful, substantial,

three inches seven *lignes* long, two inches nine *lignes* wide, and finely and not very uniformly & deeply denticulate. The middle leaves are very finely & uniformly denticulate. The petiole is two inches four *lignes* long.

The flowers are the largest of all pear trees flowers. They're twenty-one *lignes* in diameter. The petals are ten *lignes* long, eight *lignes* wide, and concave spoonlike.

The fruit is big, three inches five *lignes* high & two inches eight *lignes* in diameter. It's shaped somewhat like a gourd. In the center at the top, which is slightly elongated, there's a narrow & not very deep indentation where the eye is situated. The end at the stalk is extremely blunt. It terminates in several large bumps & deep creases. The stalk, about two inches long, inserts in the middle of them. The stalk is thick and fleshy, sometimes from its origin to beyond half its length. The entire fruit is angular & knobby like the winter Bartlett.

Its skin is smooth, very light green and speckled with dark green spots. It turns yellow when the fruit ripens.

Its flesh is white, tender or semi-crisp.

The juice is plentiful and sweet.

The seeds are very long and a very light brown.

It ripens around the beginning of September.

XCI. *PEAR TREE with medium-sized, conical, quince-shaped yellow to somewhat red summer fruit.*

BON-CHRÉTIEN [BARTLETT] d'été musqué.(*Pl. XLVIII.*)

This is a delicate tree even when grafted on wild stock. It's never grafted on the quince tree.

The shoots are long, average in thickness, quite straight, very spotted, reddish brown in color, tending toward purple or gray-brown. It's lighter on the shaded side.

The buds are big, broad at the base, and almost flat. Their stems are thick and somewhat enlarged above the eye.

The leaves are small, two inches nine *lignes* long and twenty-one *lignes* wide. Some have almost smooth margins, others are finely & quite deeply denticulate. The central vein curves downward. The petioles are about seven or eight *lignes* long.

The flowers are seventeen *lignes* in diameter. The petals are rounded and almost flat. The tips of the stamens are a mixture of purple & white. Many of the flowers have six or seven petals.

The fruit is medium-sized, twenty-seven *lignes* in diameter by thirty-three *lignes* high. These dimensions often are smaller. It's long and looks more like the quince pear than the winter Bartlett pear. Sometimes it's quite short and pear-shaped. Very often it tends to be shaped somewhat like a gourd. It usually becomes smaller at the top where there's an indentation with ridges around the edge. The eye, average in size, is situated at the bottom. The other end abruptly diminishes in size & it's very blunt at the end. The stalk is thick, fifteen *lignes* long, and inserts into a cavity bordered by bumps. The entire fruit often is marked with bumps & small ridges; at times it's slightly angular at the top.

Its skin is smooth, yellow, and streaked with red where it had been struck by the sun.

Its flesh is white, scattered with greenish spots, and crisp.

The juice is a little sweet, very musky and flavorful, with no tartness.

The seeds are small & brown.

This pear ripens at the end of August. It's a good fruit & a very beautiful one, but it's apt to split open or to crack before it matures.

XCII. *PEAR TREE with large, bent blunt conical golden yellow summer fruit darkened with spots.*

MANSUETTE. SOLITAIRE. (*Pl. LVIII. Fig. 1.)*

This pear tree bears some resemblance to the winter Bartlett. It does better grafted on the quince tree than on wild stock.

The shoots are long, of medium thickness, bent at each node, flattened & somewhat grooved below the stems. They're dull gray, sometimes with a very light reddish tinge and speckled with very tiny spots.

The buds are round, very short and quite free of the branch. Their stems are very thick & enlarged above & below the eye.

The leaves are medium-sized. They're three inches long, twenty-six *lignes* wide, and come to a point. The margins are wavy. Some are quite finely & noticeably denticulate, but others very little so. The veins are almost as prominent on the top of the leaf as they are underneath it. The central vein curves downward & folds to form a groove. The stalk is thick & fourteen *lignes* long.

The flowers are eighteen *lignes* in diameter and are wide open. The petals are oval and almost flat. The tips of the stamens have little color.

The fruit is long, stout and not very uniform in shape. Its shape is very close to that of the winter Bartlett but less strewn with bumps & irregularities. It's two inches seven *lignes* in diameter & three inches five *lignes* high. The stalk is thick & quite full; it's twelve to fourteen *lignes* long. It usually inserts at a slant and flush with the fruit where there's a bulge & several narrow creases at the origin. This end of the fruit is blunt & much less thick than the other end;

it's only ten or twelve *lignes* in diameter. It also becomes smaller at the top where the eye often is set obliquely. As a consequence the eye & the stalk are visible on the same side & at the same time. The eye is set in a small indentation bordered by not very prominent ridges.

Its skin is green with brown spots & sometimes is completely covered by this color on the shaded side. The side in the sun turns slightly yellow & even takes on a light tinge of red when the fruit matures.

Its flesh is white, semi-soft, average in delicacy, and is apt to turn mushy.

The juice is quite plentiful and accented with a slight tartness.

The seeds are small, wide, and light brown.

This pear ripens around the beginning of September.

XCIII. *PEAR TREE with large, conical, nearly pyriform golden yellow autumn fruit.*

MARQUISE. (*Pl. XLIX.*)

This is one of the most vigorous pear trees. It's beautiful, fruitful, & it's grafted on wild stock & on the quince tree.

The shoots are long, thick, straight, not spotted, gray on the shaded side with a very slight reddish tint on the side in the sun. The tips are red brown.

The buds at the thickest part of the shoot are quite big, pointed, very rounded, & their stems are very flat. Near the tip of the shoot they're very small, pointed, not very free of the branch, & have thick stems.

The leaves are medium-sized, two inches seven *lignes* long, two inches two *lignes* wide, and are folded along the central vein. The margins are almost smooth; their denticulation is barely discernible. The stalks are an inch long.

The flowers are seventeen *lignes* in diameter. The petals are flat, longer than they are wide, and very ruffled on the margins.

The fruit is a big elongated cone. It's two-&-a-half inches in diameter & two inches nine *lignes* high. It bears little resemblance to the winter Bartlett with which Merlet compares it in shape. It's more pointed near the stalk, it has no bumps on its surface, & it's not at all gourd-shaped. Normally the top is quite round at its circumference; sometimes it's a bit angular. The eye at times is almost flush with the fruit and at times sunken into quite a deep cavity. The stalk, twelve to fifteen *lignes* long, also sometimes inserts flush and sometimes into the bottom of an indentation. It's thick & smooth. It's not unusual to find Marquise pears that are three inches in diameter by three inches four *lignes* high. These large fruits generally are very enlarged at the middle, diminish greatly in size toward the stalk, & terminate there in a not very elongated point which is quite blunt or truncate. They are not conical in shape.

Its skin is green and very speckled with spots that are darker green. It turns yellow when the fruit ripens. Sometimes it takes on a very light tinge of red on the side in the sun.

Its flesh is buttery & juicy.

The juice is sugary, sweet and sometimes a little musky.

The seeds are big and terminate in a sharp point.

It ripens in November & December. Since the tree is so vigorous, care must be taken to prune it.

XCIV. *PEAR TREE with very large conical, practically turbinate winter fruit, green on one side to pale red on the other.*

COLMART. POIRE MANNE. (*Pl. L.)*

This pear tree is grafted on wild stock & on the quince tree.

The shoots are of average length & thickness, straight, a yellow wood-color on one side, somewhat brown on the other and very finely speckled.

The buds are big, pointed, somewhat flat and not very free of the branch. Their stems aren't very prominent.

The leaves are large, three inches ten *lignes* long and two inches two *lignes* wide. The midrib curves downward and the leaf folds along it. On most of the larger leaves the margins are slightly ruffled & are smooth at the edge; the middle leaves are finely, uniformly, & quite deeply denticulate. The petioles are sixteen *lignes* long.

The flowers are fully open and sixteen *lignes* in diameter. The petals are almost flat and trowel-shaped. Some have a little red at their tip. The tips of the stamens are pink.

The fruit is very big, two inches nine *lignes* in diameter & three inches long. It's quite compressed at its top end where the eye, which is medium-sized, is at the bottom of an indentation. The end near the stalk doesn't decrease much in size. The stalk is brown, thick, and usually slightly enlarged at the end near the fruit. It's ten or eleven *lignes* long and sometimes inserts almost flush with the fruit but more frequently into the bottom of a cavity that's quite deep & edged with a few bumps. The fruit is more turbinate than it is pyriform. It bears some resemblance to the winter Bartlett, especially when it's elongated. There's often a small groove visible along one side of it that extends from the top to the stalk.

Its skin is very thin, green speckled with small brown spots, & turns slightly yellow when the fruit ripens. It's lightly streaked with red on the side in the sun. Sometimes it has a small powdery or whitish eye.

Its flesh is slightly yellow, very delicate, buttery, juicy, delicious and not gritty.

The juice is very sweet, sugary & flavorful.

The seeds are brown, pointed, of average size, and often fail to develop.

This pear is consumed in January, February, March, & even in April.

XCV. *PEAR TREE with large smooth blunted-conical lemon yellow winter fruit.*

VIRGOULEUSE. (*Pl. LI.*)

This tree is the most, or one of the most, vigorous of the pear trees. It's slow to bear fruit, but it is fruitful and not very fastidious about soil & exposure. However a south-facing espalier is not very suitable for it because the fruit will then split & become disfigured. It's grafted on wild stock & on the quince tree.

The shoots are long & very strong, full of snags at the base, slightly bent at each bud, green and very speckled with gray spots. Some are reddish, at least on the sun side, especially when the pear tree is grafted on a quince tree or planted in a warm exposure.

The buds are big, round, pointed, very broad at the base and free of the branch. Their stems are flat.

The leaves are big & beautiful. They're wide at the end near the stalk; they narrow quite uniformly & terminate in a point. They're three inches five *lignes* long, two inches six *lignes* wide, finely & not very deeply denticulate. The veins are thin. The midrib curves downward. The leaf closes along the central vein with wavy ruffled margins. The petioles are an inch long.

The flowers are fourteen *lignes* in diameter. The petals are pointed ovals and are not very concave.

The fruit is big; it's two inches five *lignes* in diameter & three inches high. It's long & is very beautifully shaped. Its largest diameter is closer to the eye than to the stalk. The eye is small and is set in the bottom of a quite wide & not very deep indentation.

The end toward the stalk gets progressively smaller & doesn't come to a point. Instead, it enlarges a bit at the end where the short stalk, only eleven *lignes* long and slightly plump at its origin, inserts at a slant into a small indentation bordered by several creases. It easily detaches from the branch.

Its skin is smooth and flecked with a few small red spots. Green at first, it turns almost lemon yellow & when it ripens it usually acquires a light reddish tint on the side in the sun. Sometimes it gets a lot of color, especially when on espalier.

Its flesh is tender, buttery, and juicy. It readily takes on an aroma of the objects on which it ripened.

The juice is plentiful, sweet, sugary, and flavorful. Some reproach it for having a slight waxy taste.

The fruit ripens in November, December and January. It's one of the most delicious pears.

XCVI. *PEAR TREE with large conical green winter fruit marked with dark spots.*

SAINT-GERMAIN. INCONNUE LA FARE. (*Pl. LII.)*

This pear tree is vigorous & very fruitful. It's grafted on wild stock & on the quince tree.

The shoots are medium in thickness, long, not very bent at the nodes, and speckled with very tiny gray spots. They're greenish gray with a very slight reddish color on the side in the sun.

The buds are short, quite thick, pointed, and free of the branch. Their stems are enlarged both above & below the eye.

The leaves are long, narrow, folded along the central vein and finely denticulate. They're three inches three *lignes* long

and twenty *lignes* wide. The midrib curves downward and the petiole is ten *lignes* long.

The flowers are thirteen *lignes* in diameter. The petals are flat, longer than they are wide and slightly pointed at both ends. The tips of the stamens are light purple mixed with white.

The fruit is full, long, two inches six *lignes* in diameter & three inches six *lignes* high. Its fullest part is a third the way along its height. The end near the top diminishes slightly in size. The normally small eye is set in the bottom of a small, round, narrow & not very deep indentation that very often is off center & has an edge higher on one side than on the other. The end at the stalk decreases in size quite uniformly & generally terminates in a blunt point. The stalk is brown, thick at its end, six to nine *lignes* long, and very often inserts at a slant beneath a sort of bump. The entire fruit almost always is set off with bumps & ridges that sometimes are evident along its whole length.

Its skin is green, quite rough, spotted with brown and often marked with large reddish spots especially near the eye. It turns yellow when the fruit ripens.

Its flesh is white, very buttery & juicy even though it's not very delicate. It's likely to have a lot of small granules beneath the skin & next to the seeds if the tree is planted in dry soil, which is not suitable for it. The flesh never turns soft.

The juice is very plentiful & delicious as long as it has no more tartness than is necessary to pleasantly enhance its flavor.

The seeds are full, long, pointed, brown, and slightly curved at the tip.

This pear begins to ripen in November. It keeps until March & sometimes into April.

Merlet claims, & I believe I also can at least presume it to be true, that there's another type or variety of the Saint-Germain that doesn't differ at all in its branches, leaves, & flowers. Only its fruit is less consistent in shape. It's usually thicker, not as long, less well formed, more angular, and it's always green even when ripe. It's flecked with large spots that are darker green, and it has no reddish spots. It's an earlier fruit & it doesn't keep as well. In some years it begins to ripen from the end of October on, & it's gone before January. It's softer, not as flavorful, and almost never has any tartness. I've never seen both of these types of pears on the same tree, but rather they're on different trees in the same area, which seems to confirm my supposition.

XCVII. *PEAR TREE with large conical, smooth, green to white autumn fruit.*

LOUISE-BONNE. (*Pl. LIII.*)

This is a beautiful tree, vigorous & very fertile. It prefers dry soil & open ground rather than the espalier. It's grafted on wild stock & on the quince tree.

The shoots are strong, spotted, quite straight, gray-green, with a very light reddish tinge at the tip.

The buds are very long, rounded, pointed, and free of the branch. The stems are not very prominent.

The leaves are two inches nine *lignes* long and two inches four *lignes* wide. They're folded in a boat-shape and are uniformly, finely, & not very deeply denticulate. The stalk is an inch long.

The flowers are fourteen *lignes* in diameter. The petals are longish and not very concave.

The fruit is big, long, two inches seven *lignes*

in diameter & three inches six *lignes* high. (Generally it's a better pear when it's only medium-sized, about two inches two *lignes* in diameter by two inches ten *lignes* high; on rare occasions it grows bigger when it's in dry soil.) It looks quite a lot like the Saint-Germain, but it's smoother and more rounded at the top where there's a small eye that's flush with the fruit. If the other end were more pointed, it would be like a pearl-shaped pear. The stalk is short, at times only three *lignes* long. It inserts flush with the fruit. It's plump at its origin and is often propped up by a thick fleshy pad.

Its skin is soft, very smooth, and speckled with spots & small flecks. It's green and turns whitish when the fruit is ripe.

Its flesh is semi-buttery & tastes very good when grown in dry soil. It's not apt to become gritty or soft.

The juice is plentiful, sweet, and is enhanced with a pleasant flavor.

The seeds are big, quite full, and pointed.

This pear ripens in November & December. The fruit is very mediocre when grown in cold & damp soil that is unsuited to it.

XCVIII. *PEAR TREE with medium-sized, blunt conical smooth green late-ripening fruit.*

IMPÉRIALE à feuilles de Chêne [*Translator's note:* oak-leaved].(*Pl. LIV.)*

This is a very vigorous pear tree. It's grafted on wild stock & on the quince tree.

The shoots are big & strong, bent at each node, green, very spotted, with a light reddish tinge on the side in the sun.

The buds are medium-sized, flattened, very pointed, broad at the base, and not very free of the branch. Their stems are thick.

The leaves are very large, four inches long

and two inches four *lignes* wide. They're not very uniformly denticulate, quite ruffled & wavy at the margins as though they were sort of indented; they look more like a small curly cabbage leaf rather than an oak leaf. The petioles are an inch long.

The flowers are fifteen *lignes* in diameter. The petals are long and pointed at both ends. The tips of the stamens are dark purple.

The fruit is medium-sized and long. It's two inches three *lignes* in diameter & two inches nine *lignes* high. It has the shape of a medium-sized Virgouleuse. The top is rounded & the eye, a small one, is set in a not very deep indentation or flattening. The other end diminishes almost uniformly in size & it's blunt at the tip. The stalk, quite thick especially at its origin, is ten *lignes* long and inserts into the center of a flattened area.

Its skin is green, very smooth & glossy. It shrivels as the fruit approaches maturity, and it then turns yellow.

Its flesh is semi-soft and is not gritty.

The juice is sweet & tasty but inferior in quality to that of the Virgouleuse. The seeds are large, brown, very full, and terminate in a long point. This fruit usually has only four seed compartments.

This pear ripens in April & May. Even though it's not a delicious one, it's very creditable during that season.

XCIX. *PEAR TREE with small, long, yellow somewhat reddish winter fruit, pointed at both ends.*

SAINT-AUGUSTIN. (*Pl. LVIII. Fig. 3.*)

This tree is grafted on wild stock & on the quince tree.

Its shoots are small, not very bent at the nodes, spotted, greenish-yellow on the shaded side and a very light reddish color on the side in the sun.

The buds are big, somewhat flattened, pointed, and not very free of the branch. Their stems are thick.

The flowers are fifteen *lignes* in diameter. The petals are concave like a spoon and trowel-shaped.

The leaves are three inches three *lignes* long and two inches wide. They're quite a deep green & shiny on top, whitish on the outside, and curve downward. They're very finely & not very deeply denticulate and are attached by very long stalks that are two-&-a-half to three inches long.

The fruit is small, long, and enlarged at the middle. It diminishes in size toward the top where the eye is set even with the fruit. It diminishes even more toward the other end but doesn't come to a point. The thick stalk is an inch long and inserts among several bumps; there is no indentation. It's two-&-a-half inches high & twenty-two *lignes* in diameter.

Its skin is lightly tinged with red on the side in the sun. The other side turns a lovely light yellow when the fruit matures. It's speckled & sometimes spotted with brown.

Its flesh is generally firm.

The juice is musky & not very plentiful.

The seeds are longish, black, and very full.

This pear ripens in December & January. As just described above, & when in loose & dry soil, the fruit is only of average quality. But in good soil

that's a little more substantial, it's much larger, very tasty, and its juice is fragrant & plentiful. La Quintinye, evidently having seen it in different soils, didn't believe it was the same pear.

C. *PEAR TREE with large, longer ash-gray autumn fruit marked with red spots.*

PASTORALE. MUSETTE d'automne. (*Pl. LV.)*

This pear tree is better grafted on wild stock than on the quince tree.

Its shoots are long, of medium thickness, slightly bent at each bud, light brown, a little powdery, and speckled with very tiny spots.

The buds are triangular, slightly flattened, and lie against the branch. Their stems are wide & prominent.

The leaves are two inches nine *lignes* long, twenty-two *lignes* wide, finely & not very deeply denticulate. Their petioles are fifteen lignes long. The middle leaves are long. Their midrib bends downward. Their margins are finely & quite deeply denticulate, and their petioles are twenty-two *lignes* long.

The flowers are fifteen *lignes* in diameter. The petals are oval and slightly concave. The tips of the stamens are red mixed with a lot of white.

The fruit is long & full, two inches six *lignes* in diameter & three inches nine *lignes* high. It's enlarged around the middle. The top end diminishes in size & the eye is situated there almost flush with the fruit. The end near the stalk is elongated & diminishes in size quite uniformly. The tip isn't pointed, but instead it's rounded, & the stalk inserts there flush with the fruit. It's about thirteen or fourteen *lignes* long, thick, plump at its origin & at times has a thick spiral pad around it.

Its skin is grayish. It turns yellow when the fruit matures and is scattered with reddish spots.

Its flesh is semi-soft, usually not gritty & leaves no residue.

The juice is slightly musky & very good.

The seeds are short & wide. They very frequently fail to develop.

This pear ripens in October, November, & December.

CI. *PEAR TREE with large, longer, pale green winter fruit.*

CHAMP-RICHE d'Italie.

This is a vigorous tree. It's grafted on wild stock & on the quince tree.

The shoots are stout, long, & strong. They're bent at each node and speckled with very tiny reddish spots that aren't very noticeable.

The buds are triangular, wide, flat, and free of the branch. Their stems are thick and swollen above & below the eye.

The leaves are large, round, flat, and finely denticulate. They're three inches four *lignes* long and two inches eight *lignes* wide. Their petioles are seven *lignes* long.

The flowers are sixteen *lignes* in diameter. Their petals are almost round and slightly concave.

The fruit is big, long, two inches seven *lignes* in diameter by three inches six *lignes* high. The most enlarged part is about halfway along its length. The top end doesn't decrease much in size. The eye is quite large & is set in a wide & not very deep indentation. The end near the stalk diminishes considerably in size without the fruit being gourd-shaped. It terminates in a point that's almost sharp, where the stalk inserts flush with the fruit. The stalk is thick at its end, straight, and fourteen *lignes* long.

Its skin in light green and is scattered with spots & small gray flecks.

Its flesh is white, semi crisp, and is not gritty. Normally there are only four seed compartments in this fruit; each one contains two long slender light brown seeds that are curved at the tip.

In December & in January this pear is very good stewed & in compotes.

CII. *PEAR TREE with very large, mostly blunt pyriform late fruit, partly pale, partly dark red.*

CATILLAC. (*Pl. LVIII. Fig. 4.*)

This is a very vigorous pear tree. It's better grafted on wild stock than on quince trees.

The shoots are stout, not very long, bent at each bud, flax-gray, reddish below the stems and not very spotted.

The buds are big, flat, and sort of stuck to the branch. Their stems are thick.

The leaves are large, oval, pointed at both ends, very lightly & unevenly denticulate but more evenly & deeply so toward the tip. They're four inches long and two inches six *lignes* wide. The petioles are fourteen *lignes* long.

The flowers are beautiful & very large; they're twenty *lignes* in diameter. The petals are concave, nine *lignes* long and eight *lignes* wide. The tips of the stamens are light purple, almost pink. The pedicels, the calyx, its divisions, and the undersides of new leaves are covered with a thick white down.

The fruit is very big, usually nearly gourd-shaped, sometimes pyriform.

It's three inches eight *lignes* in diameter & three inches five *lignes* high. The top is very big and flattened. The small eye is set in an indentation that's quite deep & not very wide relative to the size of the fruit. Sometimes it's smooth but it's often bordered with not very high ridges that extend over that part of the fruit. The end near the stalk diminishes abruptly in size & comes to a rounded point where the stalk, thirteen *lignes* long, thick & slightly plump at its origin, inserts into a small indentation.

Its skin is gray. When the fruit ripens it turns pale yellow lightly tinged red-brown on the side in the sun and speckled all over with small red spots.

Its flesh is white and tastes very good stewed. It turns a beautiful color when cooked.

The seeds are small, long, and light brown.

This pear is used from November until May.

CIII. *PEAR TREE with the largest possible late fruit, smooth, somewhat round, partly yellow, partly beautiful red.*

BELLISSIME d'hiver.

The winter Bellissime is bigger than the Catillac. It's up to four inches in diameter by three inches nine *lignes* high. It's almost round in shape, becoming somewhat smaller at the end toward the stalk. The stalk is thick, eight to ten *lignes* long, and inserts flush with the fruit or between some not very high bumps. The top end is rounded & the eye is situated in a not very deep indentation.

Its skin is smooth. It's a beautiful red speckled with light gray on the side in the sun; the shaded side is yellow with tan spots.

Its flesh is tender, not gritty, and very soft when stewed.

The juice is sweet, plentiful, not tart and enhanced with a bit of a wild taste.

This pear, with a name that well befits its extraordinary size & beautiful colors, keeps until May. It's much better than the Catillac when cooked under bell glass. One even can prepare quite good compotes from it.

CIV. *PEAR TREE with very large, blunt pyriform winter fruit, green with reddish spots.*

LIVRE.

This is a very vigorous tree when grafted on wild stock, but it won't succeed at all on the quince tree.

The shoots are thick, very bent at each node, gray-green, slightly powdery, with a light reddish tinge on the side in the sun & at the tip. They're not very spotted.

The buds are short, flattened, broad at the base, not very pointed and free of the branch. Their stems are thick.

The leaves are large, three inches six *lignes* long and two inches ten *lignes* wide. They fold differently, are frequently wrinkled next to the midrib, and are finely & not very deeply denticulate. The stalk is an inch long.

The flowers are very open, sixteen *lignes* in diameter. The petals are oval, flat, oblong & narrow.

The fruit is very big, three inches eight *lignes* high. On one side its diameter is three inches seven *lignes*, & on the other it's three inches three *lignes.* It's flattened that way along its length. When the fruit is in good condition it's pyriform, blunt at the end near the stalk, quite round at the top & at its middle. The top end is rounded. The eye is small & is set at the bottom of a deep cavity about fifteen *lignes* wide. The end near the stalk diminishes in size almost uniformly & comes to a very blunt point. At the center there's a deep & narrow indentation with a border that's

much higher on one side than on the other. The stalk, somewhat plump at its origin, thick, and sixteen *lignes* long, inserts into it.

Its skin is green; it yellows a little when the fruit ripens. But it's so covered with specks & reddish spots that the color is barely discernible.

The flesh is delicious when stewed and its juice has sweetened at maturity.

This large pear ripens in December, January, & February.

CV. *PEAR TREE with the largest fruit of all; a winter fruit pointed at both ends, lemon yellow covered with tawny spots.*

TRÉSOR. AMOUR.

This is the biggest pear of all. Grown in open ground, it's commonly four inches in diameter by four inches nine *lignes* high, & often some are much larger than that (those on espalier & bush trees are even considerably more so). It's usually oblong in shape and enlarged at the middle. It diminishes in size toward the eye, which is small & set in a flattening or in a not very concave indentation. The end near the stalk elongates & diminishes further in size and terminates almost uniformly in a blunt or truncate point. At the tip a very thick stalk about an inch long inserts into a quite deep & narrow cavity. At times the height of the fruit exceeds its diameter only by three or four *lignes*. The greatest enlargement is near the top, & its shape resembles an extremely truncate cone. The largest fruits frequently are flattened at their middle, which is four or five *lignes* shorter on one side than on the other.

Its skin is lemon yellow, rough to the touch,

and so covered with yellow-brown or tan spots that its yellow color is practically invisible.

Its flesh is white and not at all gritty. It's tender & almost juicy when it's ripe.

The juice is plentiful, sweet, and has no bitter nor uncultivated taste.

The seed compartments are extremely small & contain very thin & very elongated seeds (five *lignes* long by two *lignes* wide), most of which usually fail to develop.

This pear, quite nice when eaten fresh for those who aren't too fussy about taste, is delicious when stewed & is far preferable to the Catillac & Livre pears. It starts to ripen in December & keeps until March. This tree is too vigorous to survive when grafted on the quince tree.

CVI. *PEAR TREE with very large, barrel-shaped winter fruit, partly lemon yellow, partly beautiful red.*

TONNEAU. (*Pl. LVIII. Fig. 5.*)

This pear tree is vigorous & is grafted on wild stock & on the quince tree.

The shoots are very thick, long, & strong. They're slightly bent at each node, speckled with very tiny spots, slightly powdery, flax-gray on one side and a pale lilac color on the other.

The buds are large, flat, and lie against the branch. Their stems are broad & thick.

The leaves are large, four inches three *lignes* long and two inches five *lignes* wide. They're widest closer to the stalk than they are at the other end, which terminates in a long & sharp point. The margins are smooth. The stalk is twenty *lignes* long. It's a light red color

on the side in the sun. The shaded side & the midrib are white.

The flowers are wide open and seventeen *lignes* in diameter. The petals are long, narrow, and almost flat.

The fruit is very big. It's shaped somewhat like a barrel. Its diameter at the middle is three inches two *lignes*, at the end with the eye twenty-three & at the end at the stalk eighteen *lignes*. The eye is located in a very deep cavity bordered by small creases or grooves. The stalk, an inch long, also inserts into a cavity that's very deep & bordered by small creases. This is a beautiful fruit & its circumference is uniformly round along its entire length.

Its skin is green on the shaded side and turns yellow when the fruit ripens. The side in the sun is a beautiful bright red.

Its flesh is very white; it's a little gritty around the seeds.

The seeds are black, long & flat and cramped for space.

This lovely fruit ripens in February & March. Beyond embellishing a dessert, it's delicious stewed & in compotes.

CVII. *PEAR TREE with medium-sized, somewhat gourd-shaped smooth winter fruit, golden yellow on one side and slightly reddish on the other.*

NAPLES. (*Pl. LVI.*)

This pear tree is vigorous & fruitful. It's grafted on wild stock & on the quince tree.

The shoots are thick, quite short, very full of buds that aren't entirely opposite, bent at each bud, gray mingled with brown and very speckled.

The buds are big, shaped like a very pointed cone, and not very free of the branch. They have thick stems.

The leaves are long, narrow, and not denticulate. Some have wavy margins, others curl downward.

They're three inches long and fifteen *lignes* wide. The petioles are fifteen to twenty *lignes* long.

The flowers are thirteen *lignes* in diameter and are wide open. The petals are flat and almost round.

The fruit is medium-sized and somewhat gourd-shaped. It diminishes considerably in size toward the stalk, which is eight to ten *lignes* long & inserts into a deep & smooth cavity. The top decreases a little in size & the eye, very open, is set in a smooth & not very concave indentation. The diameter of the fruit is twenty-five *lignes* & it's twenty-six *lignes* high.

Its skin is smooth and greenish. It turns yellow when the fruit matures. It has a light red-brown tinge on the side in the sun.

Its flesh is semi-crisp, sometimes slightly buttery, and it's not gritty.

The juice is sweet & quite pleasant for the season in which this fruit ripens.

The seeds are big & very full. The axis of the fruit is hollow.

It matures in February & March.

CVIII. *PEAR TREE with medium-sized, longish rough winter fruit, yellow becoming very slightly red.*

ANGÉLIQUE de Rome.

This is a vigorous pear tree. It's grafted on wild stock & on the quince tree.

The shoots are long, of average thickness, and very speckled. They're green at the base, a light red-brown toward the tip, and have almost no bends in them.

The buds are average sized, rounded, and not very free of the branch. Their stems are quite thick.

The flowers are very open and are sixteen *lignes* in diameter. The petals are racket-shaped, flat, and slightly pointed at the end. The tips of the stamens are pink.

The leaves are average-sized, three inches long and twenty *lignes* wide. They're oval at the end near the stalk, which is white, slender, and two-&-a-half inches long. The other end tapers into a point. They don't fold along the central vein at all; the midrib curves outward, & the leaves curl or fold downward in different ways. The denticulation is barely noticeable.

The fruit is medium-sized and oblong in shape. It's twenty-seven *lignes* in diameter & twenty-eight *lignes* high. It's bigger in soil that's better suited to this not very fruitful pear tree. Its top is quite rounded, & the eye, an extremely small one, is set in a smooth, confined and not very deep indentation. The other end diminishes in size. The stalk, extremely thick and seven to nine *lignes* long, inserts flush with the fruit or into a narrow groove.

Its skin is rough to the touch, similar to that of the Echasserie pear. It's a pale lemon or marigold yellow. At times the side in the sun is very lightly tinged with red.

Its flesh is slightly yellow, tender and semi-soft. There are several small granules around the seeds. In dry soil the flesh usually is crisp & gritty.

The juice is plentiful, sweet & quite flavorful.

The fruit ripens in December, January, & February. A difference in soil can make a big difference in this fruit resulting in a large & very good pear or one that's just average in size & quality.

CIX. *PEAR TREE with barely medium-sized, smooth, round, yellow autumn fruit.*

LANSAC. DAUPHINE. SATIN. (*Pl. LVII.*)

This pear tree is grafted on wild stock & on the quince tree.
The shoots are of average size flecked with large greenish gray spots on the shaded side and have a light reddish tint on the side in the sun.

The buds are big, rounded, long, very pointed, and free of the branch. Their stems are thick.

The leaves are three inches six *lignes* long and two inches three *lignes* wide. They fold along the central vein and are very finely but barely perceptibly denticulate. The midrib curves downward; the petioles are thirteen *lignes* long.

The flowers are very open and seventeen *lignes* in diameter. The petals are flat, very long & narrow.

The fruit is medium-sized, twenty-three *lignes* in diameter & twenty-four high. Sometimes it's round but more often it gets a little smaller toward the ends. The eye is set in a not very deep indentation; frequently it's almost even with the fruit. The stalk is thick, seven to ten *lignes* long and plump at its origin. Sometimes it inserts flush with the fruit and sometimes into a small indentation.

Its skin is smooth & yellow.
Its flesh is juicy.
The juice is sweet; it has a pleasant flavor & is enhanced with a slight fragrance.
The seeds usually fail to develop.
This pear ripens at the end of October & sometimes keeps until January.

CX. *PEAR TREE with small, deeply ash-gray autumn fruit with a very long pedicel.*

VIGNE. DEMOISELLE. (*Pl. LVIII. Fig. 2.*)

This is quite a vigorous tree. It's grafted on wild stock & on the quince tree.

The shoots are short, slender, bent at each node, greenish gray on the shaded side and lightly colored on the side in the sun.

The buds are medium-sized, rounded, pointed, and very free of the branch. Their stems are thick.

The leaves are quite large, oval, three inches four *lignes* long and two inches three *lignes* wide. They're not noticeably denticulate except at the tip. The midrib curves downward. The petioles are nineteen *lignes* long.

The flowers are seventeen *lignes* in diameter. The petals are very long & very narrow, eight *lignes* long by three-&-a-half *lignes* wide.

The fruit is small, nineteen *lignes* in diameter & twenty-one *lignes* high. The top is very round & a large & very open eye is set there flush with the fruit. The other end diminishes greatly in size; so if it came to more of a point, the fruit would be pyriform. Its stalk is nearly two inches long and thick at the end.

Its skin is rough and gray-brown. The side in the sun takes on a light reddish color in some parts, speckled with small gray spots.

Its flesh is buttery and somewhat juicy.a little soft. If the fruit hasn't been picked before it's ripe, it turns mushy; it gets mealy if it's allowed to ripen too long in a fruit loft.

The juice is extremely good and very flavorful.

The seeds are large, black, & very full.

The fruit matures in October.

CXI. *PEAR TREE with medium-sized smooth pyriform red-fleshed summer fruit.*

SANGUINOLE.

This is a vigorous tree. It's grafted on wild stock & on the quince tree. The shoots are brown and powdery.

The leaves are large, almost round, but wider than they are long and slightly powdery. They're flat, though a bit wrinkled at the margins where only a few not very conspicuous denticulations are visible. Some streaks on the leaf & a few of the small veins are red. The leaves are three inches long & three inches four *lignes* wide. The petioles are thick and two inches three *lignes* long.

The flowers are sixteen *lignes* in diameter. The petals are oval and concave like a spoon. Some are colored red at the margins. The calyx is reddish.

The fruit is medium-sized, twenty-three *lignes* in diameter by twenty-four high. It's pyriform, slightly compressed at the top where the eye, which is very big, is situated at the bottom of a large cavity. The stalk is eighteen *lignes* long. At its insertion there's a groove that appears to separate it from the fruit.

Its skin is smooth, green, speckled with very tiny spots, gray on the shaded side and red on the side in the sun.

Its flesh is red, coarse & quite tasteless.

This pear ripens in August. It's not worth cultivating except as a curiosity.

CXII. *PEAR TREE with small, pyriform, somewhat yellow summer fruit.*

SAPIN.

The Sapin pear is small, pyriform, compressed at the top, where a quite small eye is set in an indentation that's very wide, smooth, & of average depth. The other end diminishes in size uniformly & comes to a blunt or somewhat truncate point. The stalk is thick, eleven or twelve *lignes* long, and inserts almost flush with the fruit. It has a green skin that turns slightly yellow on ripening. Its flesh is white & very coarse. The juice isn't very plentiful and is not very flavorful, even though it has a little fragrance. The seeds are dark brown and quite full. It ripens toward the end of July & isn't too bad for an early pear.

CXIII. *PEAR TREE with medium-sized summer fruit compressed at the center & appears as though it were twinned.*

POIRE à deux têtes.

This is a medium sized pear that doesn't have a very uniform or definite shape, however it comes closer to being turbinate than to any other form. Its stalk is thick, ten to twenty *lignes* long, often somewhat fleshy at its origin, and inserts into the fruit at a slant. An extension of the flesh of the fruit covers the stalk on one side & terminates in a definite point, so that if it were to encompass the entire origin of the stalk, the fruit would be almost pyriform. The eye is situated on an elevation formed by a collection of small bumps. It's large, oval, & more or less divided in two, which is why this pear gets the name *Two Heads.* Its skin is quite smooth, green turning to yellow on the shaded side and a pale red-brown on the side in the sun. Frequently there's quite a long tan spot near the stalk that feels rough to the touch.

Its flesh is white and not very delicate. The juice is quite plentiful & somewhat fragrant but often slightly tart. The seeds are black. It ripens around the end of July & is comparable in quality to the other pears of that season. It's twenty-five *lignes* in diameter & twenty-six *lignes* high. Sometimes the height exceeds the diameter by more than that.

CXIV. *PEAR TREE with medium-sized summer fruit, long, gourd-shaped, green to ash-gray marked with whitish spots.*

GRISE-BONNE.

The Grise-bonne is medium-sized, long and somewhat gourd-shaped. It's twenty-two *lignes* in diameter & two inches six *lignes* high. The top is quite rounded, & the eye is set flush with the fruit. The other end decreases considerably in size & terminates in a blunt point. The stalk is thick, nine to twelve *lignes* long and inserts at a slant into a small indentation.

Its skin is gray green and very speckled with whitish spots. Some parts have a red tinge.

Its flesh is juicy and somewhat buttery. It turns mealy quickly.

The juice is sweet & flavorful.

The fruit ripens at the end of August.

CXV. *PEAR TREE with medium-sized smooth winter fruit, pointed at both ends, lemon yellow on one side and red on the other.*

DONVILLE.

This pear is average-sized. It's oblong, twenty-two *lignes* in diameter by thirty *lignes* high. It gets smaller toward the top, where the eye

is set in a small indentation, or rather a smooth flattening that's confined & not very concave. It gets much smaller toward the stalk where it terminates in a blunt or somewhat truncate point. The stalk is about eight *lignes* long & inserts into a very small indentation enclosed & surrounded by several creases.

Its skin is smooth & shiny. The shaded side is lemon yellow scattered with tan spots. The opposite side is a quite bright red speckled with small light gray spots.

Its flesh is crisp and not gritty; it's white shading a little to yellow.

The juice, though a little tart, is flavorful & is not unpleasant. So this fruit, which keeps until April, can be eaten fresh in that season.

The seeds are longish, very full, and light brown.

There are those who use this same name for a pear with a different shape that's three inches high by two inches in diameter. It's almost cone-shaped. The top is very rounded, & the eye, extremely small, is set flush with the fruit. The other end progressively diminishes in size & comes to a very blunt or obliquely truncate point. The stalk, eight *lignes* long, inserts into a deep uneven cavity with bumps around it. The skin of the fruit is quite smooth, light yellow and speckled with gray spots that are barely apparent. The side in the sun is reddish-yellow. The yellow on both sides tends to be somewhat wood-colored. The juice is plentiful and slightly tart. The flesh is yellowish, coarse, firm & sometimes gritty. This pear keeps until April & it tastes good only when it's stewed.

CXVI. *PEAR TREE with medium-sized pyriform smooth shiny winter fruit, partly lemon yellow and partly a beautiful & clear red.*

CHAT-BRUSLÉ.

This is a medium-sized pear, pyriform and slightly oblong. The top is quite rounded & the eye is set in a not very concave indentation. The stalk is ten to twelve *lignes* long, thick at the end, and the same color as the fruit. It inserts at a slight slant into the tip of the fruit, which sometimes is blunt or seemingly divided into two small bumps. It's twenty-two *lignes* in diameter & two inches seven *lignes* high.

Its skin is very smooth & shiny. It's a beautiful light though bright red that's paler when it's close to the parts that never had been exposed to the sun & that are lemon yellow.

Its flesh is delicate, not gritty, and takes on a beautiful red color when stewed.

The seeds are black and very full.

This handsome pear is suitable for making delicious compotes in February & March.

The leaves of the tree are bright green, very finely denticulate, small, longish, and terminate in a sharp point.

The pear commonly called the *Chat-brûlé*, is intermediate in shape, color, & size between the *Messire-Jean* & the *Martin-sec*. Its flesh is tender, dry, often mealy & gritty. It ripens in October & November.

CXVII. *PEAR TREE with medium-sized, almost pyriform, late yellow fruit.*

SAINT-PERE or SAINT-PAIR.

This is a medium-sized, almost pyriform pear. It's twenty-six *lignes* in diameter & twenty-eight *lignes* high.

It's enlarged at the top, and the eye is set in a wide, smooth, and not very concave indentation. The other end diminishes in size almost uniformly & terminates in a somewhat blunt point. The stalk, quite thick and six to eight *lignes* long, inserts there flush with the fruit.

Its skin, a bit rough to the touch, is yellow everywhere, bordering on a wood- or cinnamon-color.

Its flesh is white, tender, & usually not gritty.

The juice is plentiful, & when the fruit is completely ripe it's sweet enough to be eaten fresh. It's delicious stewed & in compotes.

The seeds are large, pointed, and very dark brown.

This pear starts to ripen in March. It keeps until June.

CXVIII. *PEAR TREE with medium-sized, pyriform winter fruit, partly lemon yellow and partly a bright & beautiful red.*

TROUVÉ.

This pear, that Merlet calls *Poire de Prince, Trouvé de Montagne,* &c., is medium-sized, twenty-seven *lignes* in diameter by twenty-nine lignes high. It's uniformly pyriform in shape. The eye is large & very open and is situated almost flush with the fruit. The stalk, fifteen to eighteen *lignes* long, is thick at its end and is somewhat fleshy at its origin. It inserts at a slight slant and flush with the tip of the fruit.

Its skin is thin, a bright & quite deep red on the side in the sun. The shaded side is lemon yellow, occasionally tinged or streaked with light red. It's speckled all over with very tiny spots that are red on the yellow part & light gray on the red.

Its flesh is a slightly yellowish white, crisp, and not gritty.

Its juice is plentiful, sweet & pleasant when the fruit is fully ripe.
The seeds are brown, quite full, short, and not very pointed.
This very attractive-looking pear is eaten stewed & in compotes in January, February, & March. When completely ripe, it tastes better fresh than the preceding one. Some of them keep until April.

CXIX. *PEAR TREE with medium-sized fruit, pointed at both ends, yellow on one side, dark red on the other, and the latest pear of all.*

SARASIN.

The Sarasin pear is medium-sized, twenty-two *lignes* in diameter & thirty *lignes* high. It grows larger in good soil. It has an oblong and not very regular shape. The end with the eye diminishes in size & terminates unevenly. Consequently it's hard to stand the fruit up on that end. The eye is flush with the fruit. The other end elongates to a blunt point & terminates with quite a thick stalk six to ten *lignes* long. It bears some resemblance to the Donville pear.

Its skin is a pale red-brown speckled with gray spots on the side in the sun. On the shaded side it's a green that gets lighter as the fruit approaches maturity & it becomes pale yellow.

Its flesh is white, not gritty, and almost buttery when completely ripe.
The juice is sweet, flavorful, & somewhat fragrant.
The seeds are black, long, pointed, and not very full.
This pear is delicious stewed & in compotes. It keeps longer than any other pear. On November fourth, when I wrote the description,

there were some very healthy ones in very good condition still remaining from the previous year that could even be kept much longer. They were extremely good when eaten fresh. Very few pear trees are worth cultivating as much as this one.

To this whole list of pear trees, already too numerous, we still could add forty or fifty more found in unexceptional orchards & whose poor or mediocre fruit would only be worthy of consideration by growers eager for variety. They number many summer & autumn pears that are unexceptional in seasons with an abundance of good fruit, & a large number of winter pears, some of which are inferior in quality to those that we've already discussed & others that finish up too early. Perhaps some even think that we've described too many late pears that are good only when stewed. But these fruits become valuable during months of scarcity, when they're almost the only resource available. Every year in late autumn one discovers that these late varieties are not very familiar or widely known.

CULTIVATION.

Of all the cultivated pear trees, I don't know of a single kind that's reliably reproduced by seed planting. Grafting is the only way to propagate them.

Pear trees are grafted by bud shield, cleft, & crown grafts, depending on the form & quality of the stock. They're grafted on wild stock & on the quince tree. Wild stocks of pear trees grown from seeds or from shoots from old plants are suitable for receiving grafts of pear trees intended for orchards. Those to be grown on espalier, counter-espalier, as bush trees or as half-standard trees in kitchen gardens are grafted on quince trees. They yield medium-sized trees that are quick to produce fruit.

Quince trees prefer tilled soil, & since they don't put their roots down deeply, they don't need the same depth of good soil as does the wild pear tree stock. The common quince tree is suitable only for types of pear trees of average size & moderate sap flow. Those that become large & vigorous prefer the Portugal quince tree. Some succeed on the hawthorn, medlar, azarole, and service tree, provided that they're planted in loose & fresh soil. Others only can survive on wild stock. This choice of stocks for different kinds of pear trees is less of a rule than it is an observation, & often the quality of the soil counts as much as does the type of tree.

Generally, all pear trees regardless of the stock on which they're grafted, do well in loamy sand that's very deep. They can't succeed in better quality soil when it's only eight or ten inches deep. They barely survive in compact & clayey soil. It's a practice to graft butter pears on quince trees & to plant them in good rich soil that isn't too moist, & to graft crisp ones on wild stock & to plant them in heavy soil that has neither too much nor too little moisture. In the description of each pear tree we've noted the soil & the stock appropriate for it consistent with customary practice. We don't claim to approve or to advise here; experience has convinced us that all pear trees graft much better on wild stock than on any other stock. If gardeners prefer pear trees grafted on the quince tree for espalier, bush, or fan trees, it's because being weakened within a few years or spoiled by pruning, they yield their fruit sooner. Whereas pear trees grafted on wild stock are vigorous; they withstand these extensive restrictions for a long time & endeavor to repair them only with stronger shoots without yielding fruit. Those who prune pear trees a lot have demonstrated that they bear fruit just as quickly on wild stock

as on the quince tree, & that the quince tree is just as mediocre a stock for pear trees as the plum tree is for peach trees.

Pear trees adapt to all exposures. Even a northern one can be used for the kinds with fruit that ripens readily & takes on little color. In the same way we've indicated the proper exposure for pear trees where it's important for them.

Pear trees are pruned following the conventional rules. We'll add only one observation to that. As this tree naturally is destined to grow large, the shoots that it usually puts out are long & vigorous, and it seems only determined to grow larger, postponing any evidence or even hope of fruitfulness. So during its early years it must not be pruned hard for fear of altering the roots or causing it to produce only strong branches & false wood, & to let it fill out with as many small branches that can remain without cluttering it. If it appears too overgrown, after its youthful vigor has moderated & it's ready to yield fruit, it can be reduced & cut back without harm because it will easily grow again. So if the tree has been well taken care of for its first three or four years, any later mistakes made contrary to the rules for pruning, either from need or neglect, are reparable as long as the tree is not allowed to continue to age with its flaws. There are pear trees that frequently are ten or twelve years old and that still haven't borne any fruit because they'd never lengthened or filled out sufficiently. If instead they had filled out with small branches, the only ones appropriate for yielding fruit, & if too hard a pruning hadn't constantly increased the big ones, they would have been fruitful from their fourth or fifth year onward. For further procedures for pruning, bud removal, training, &c. see the section on General Cultivation [*Translator's note*: in Volume I].

U S E S.

Pears that are fresh, cooked without sugar & in compotes, can be eaten all year long. Some are extremely good oven-dried. None of them are suitable for either dry or liquid preserves except the Rousselet de Reims pear, which makes very good dried preserves & delicious marmalade. It's also preserved as a brandy like many other fruits.

To keep winter pears for six weeks or two months beyond their normal term after they've been picked, they have to be heaped on a table in a fruit loft & left there until they're very moist, or in common terms, until they sweat. That happens sooner or later (sometimes in twenty-four hours) depending on the ambient temperature. They're then dried off well with a cloth (some prefer serge) & lined up next to one another in the sunshine, or where the air is dry. When very dry they're wrapped up individually in paper & stored in cupboards or drawers that are well protected from frost & dampness. Cared for in this way, the life of S. Germain pears can be prolonged until the end of April & that of other late pears proportionately. The same will be true for apples.

These fruits also can be kept very well in ashes, & this is a common practice. In boxes, barrels, or even in a corner formed by two walls of the fruit loft or any other place that's well protected & inaccessible to frost & dampness, a three- or four-inch thick bed of ashes is prepared, and the fruit is laid out on it and covered with a similar layer of ashes. The latter is covered with fruit & covered again in the same way. The process is continued as long as required by the amount of fruit & as space in the container permits.

However some pears and most apples take on an unpleasant taste when left in ash; this problem can be avoided, at least in part, by wrapping them in paper.

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RUBUS IDÆUS,

RASPBERRY BUSH.

I. *Thorny RASPBERRY BUSH with red fruit.* J.B.

RASPBERRY BUSH *with red fruit.*

THE RASPBERRY BUSH is a shrub that never forms a bush tree nor a branched trunk, but instead it's a clump of several shoots that emerge from the root collar. The canes are straight, cylindrical, furnished & bristling with lots of small red thorns that have very wide bases & very fine tips that curve downward toward the ground. In one year it grows to a height of three to five feet depending on the quality of the soil & the vigor of its roots.

The leaves are alternate along the shoot. They're held on cylindrical stalks that are quite long & thick and have a number of thorns similar to those on the shoots but much smaller. There are two buds beneath the axilla of each leaf. One, thick & long, is a wood bud containing the rudiments of a branch. The other, situated behind the wood bud directly opposite the petiole of the leaf, is extremely small & contains only a single leaf.

Each leaf consists of three or five leaflets. The main leaflet extending to the end of the entire leaf is the largest & its midrib is an extension or continuation of the stem. The lateral leaflets are opposite & their midribs are branches or ramifications of the stem with which they form almost a right angle. The first two leaflets,

not much smaller than the main one, are situated halfway along the stem. The second pair of leaflets, smaller than the first pair, is located at approximately two thirds of the way between the first pair of leaflets & the main leaflet. Thus on a stem thirty-six *lignes* long, the first pair is located at eighteen *lignes*, the second pair twelve *lignes* above that or six *lignes* from the main leaflet. When the leaves consist of only three leaflets, the two lateral ones are about two-thirds the way up the stem. But the spacing isn't always that consistent, especially for leaves on fruiting branches. The leaflets are oblong, almost oval at the end where they open up, and they terminate in a uniform, sharp point at the other end. Their margins are sharply, deeply and uniformly denticulate & bidenticulate. The outsides are white and are marked with very prominent veins. The insides are bright green and are indented with deep grooves. These veins & grooves are especially pronounced because the leaflets were folded up like a fan along each vein while they were still in the bud and they retain a very distinct imprint of that. Generally the lateral leaflets are all divided lengthwise along their midrib into two sections where the lower part is slightly wider than the other part.

Around mid-February the canes from the previous year are cut back to between eighteen inches and three feet depending on their strength. The two buds of the last nodes open in the spring. A leaf grows from one bud & a fruiting branch from the other. As this branch lengthens, it produces at each node (situated alternately) a leaf & a stalk or a common stem that gives rise to several similarly alternating slender pedicels. The pedicels are sheathed at their origin & each one bears a conical flower bud that terminates in a very sharp point.

The flower consists of 1°. a calyx in one piece with a flat bottom. It's divided into five large triangular sections, about two *lignes* at the base by four or five *lignes* high and terminating in a very sharp point. When the fruit is set, they turn back downward on the pedicel. 2°. five small white oval petals, about two-&-a-half *lignes* long & a *ligne*-&-a-half wide, attached to the inside edges of the calyx between its sections. They stay almost attached to the stamens & never fall back outward. 3°. a very large number of white stamens, terminating in tips of the same color, arranged in two rows around the bottom of the calyx. The ones on the outside row are about two *lignes* long; those in the other row are extremely short. All of them lie on or lean against the pistils. 4°. a somewhat conical receptacle with a large number of oblong ovaries, each one bearing a slender style surmounted by a very small stigma. All of the styles are gathered together in a kind of bundle that rises above the stamens.

These ovaries turn into a similar number of small succulent drupelets. They're joined to one another & all are clustered together on the receptacle to form an almost hemispherical structure about seven or eight *lignes* high called the *Raspberry*. The number of seeds or drupelets that form it varies according to the number of ovaries that either have set or aborted. Almost all of them still retain the dried up style of their pistil until they mature. Most of the filaments of the stamens also last just as long.

The skin, very thin & smooth, is a dull light red & more or less covered with powder or bloom.

The pleasant & delicate fragrance of the raspberry is familiar to everyone, but too often it's impaired by the bad odor of the wood louse.

Each seed contains a tiny seed so compressed that it's hardly noticeable while eating the fruit.

The receptacle, which enlarges in proportion to the fruit, occupies the center of it. At maturity it detaches easily & remains very tightly fastened to the calyx. It sort of bristles with tiny points that are fibers of the ovaries.

II. *Thorny RASPBERRY BUSH with white fruit.* C.B.P.

RASPBERRY BUSH *with white fruit.*

This is a variety of the one above that differs only in the color of its fruit & slightly less so in its scent. Other kinds of raspberry bushes serve as decoration for gardens.

CULTIVATION.

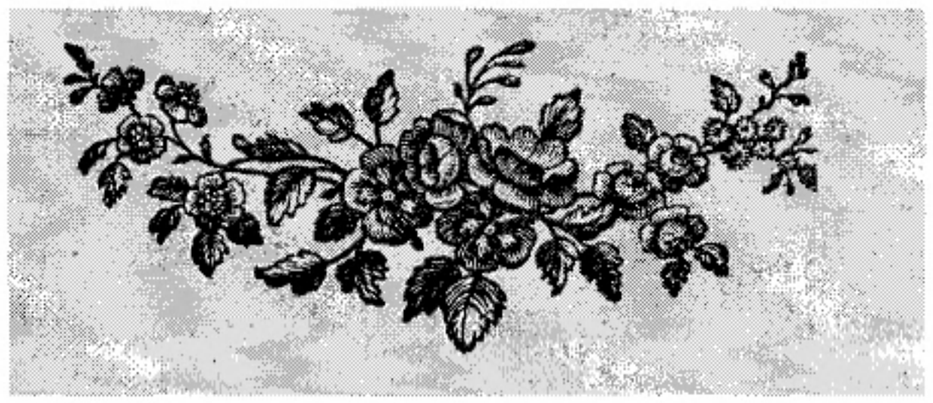
Raspberry bushes can be propagated by seed-planting, but it's easier & quicker to do it with suckers that emerge only too abundantly from their roots. The bushes are pulled up with their roots between mid-November and the beginning of March. They're cut back to twelve or eighteen inches & planted two or three feet apart in rows that are separated by four or five feet, or in staggered plantings that are farther apart, or in any other preferred arrangement.

This shrub is not deterred by any kind of soil. But it does better in slightly dry & friable soil than in damp & compact soil. In February all of the canes from the previous year are cut down to about half their length (eighteen to thirty-six inches as stated above). All those that previously had borne fruit & almost none of which had survived beyond their productive period are removed.

The earth is tilled & at the same time all of the suckers on roots that are far from the plant are pulled up; otherwise they would soon form a cluttered mass. All of this work can be done from autumn onwards. The cultivation of raspberry bushes is such that they're customarily planted in the least productive area.

USES.

Raspberries are rarely eaten fresh by themselves or unprepared. They're mixed with strawberries, currants, &c. They're used in compotes, alone or with currants. They're preserved by themselves & the preserves are extremely good & keep well but are difficult to prepare. Raspberries are used in currant jelly. They're made into pies, excellent liqueurs, robs [*Translator's note*: pharmaceutical syrups], and a soothing syrup that's very good for easing sore throats. It's called *raspberry vinegar* because it's made from white vinegar & raspberries. Raspberries also are used in several other pharmaceutical & kitchen preparations.



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VITIS,

GRAPEVINE.

GENERAL DESCRIPTION.

THE GRAPEVINE is a climbing shrub that grows as tall as it's allowed to, even surpassing the tallest of trees.

Its shoots are fairly thick & long, depending on the vigor of the vinestock. They're covered with two layers of bark. The outer one has a firm consistency and is made up of longitudinal fibers that separate easily & form sort of small rows, some of which are lighter in color and others darker. This bark layer peels off easily; it detaches by itself & falls off in the following year. It's a yellow wood-color, more or less darker or lighter depending on the type of grapevine. It's light colored on vines with white grapes and less so on those with red grapes. It's dark on vines with black or purple grapes. But these shades of color aren't sufficiently pronounced to differentiate types & varieties. The second layer of bark is green & adheres strongly to the wood.

The shoots have projecting or enlarged nodes placed at fairly wide intervals. Each node bears a leaf & two buds emerge below the axilla of the leaf. One of them opens & forms a small shoot that normally doesn't get very far, only reaching a length of one foot at most. Sometimes only the rudiments of a shoot appear.

The other bud remains dormant until the following spring. It's thick & blunt, sheathed in fluff or very fine hair that's very compact, & it's covered with scales. Sometimes hand-like structures emerge from the node on the side opposite the leaf & buds, sometimes there's a bunch of grapes, and sometimes nothing at all.

The fingers or tendrils are very strong woody filaments. They're covered with a bark layer just like the shoot, The tendrils branch into two or three filaments, attach to whatever object they find, and make several spiral turns around it. Sometimes the first small cluster or bunch of grapes is lost & degenerates into tendrils.

The leaves often are alternate on the shoot, sometimes opposite a tendril or another leaf. They're simple, divided on the margins more or less deeply depending on the type, into five lobes that are unequal in size. The one that extends directly from the stalk is the largest. The two lowest ones are the smallest, & the other two are intermediate between the latter & the main one, both in size and position. The teeth along the margins are more or less deep & sharp depending on the type & at their tips they're usually the same color as the fruit. At the center of each lobe there is a large raised midrib that emerges from the end of the stalk & extends as far as the end of the lobe. These large veins branch into several medium-sized ones that extend to the tip of each tooth. Some or others of these put forth many small veins in irregular directions that accent the outer surface of the leaf; the inner surface has the same number of corresponding grooves. The leaf's stalk is thick, strong, cylindrical or slightly compressed along the side that faces the shoot. Grapevine leaves are a beautiful green of a shade that's not very different in the different types.

The stalks & the veins are a lighter green, almost white. After the first frost, the leaves on vines with black, purple, & red fruit are tinged a fairly deep red; those on other grapevines turn yellow or red only in places.

Usually the number of new shoots arising from one that's been pruned corresponds to the number of buds that have been left on it. If the vinestock is vigorous & productive, each one of the new shoots yields one, two, & sometimes three clusters of fruit emerging from the fifth, sixth, and seventh nodes, & they appear as the shoots develop. So the shoots that put out their seventh leaf produce everything that one ought to expect of them. The cluster consists of several small bunches or clusters of grapes attached alternately on a common stalk & that have a fair number of flower buds, each one with a small pedicel.

The flower consists of 1°. a small calyx which is merely sort of a widened pedicel bordered by four or five small points or ungues. 2°. from four to six small green petals. While they remain closed up & sort of stuck to each other, they form a little pentagonal pyramid & they conceal the flower's stamens & pistil. When they're pushed apart by the force of the stamens lengthening & emerging, they remain attached only at their tips and allow the stamens to come out. Finally they open fully & are arrayed like a rose. 3°. from four to six quite long stamens that end in a tip. 4°. a pistil with no style and a blunt stigma immediately on top of the ovary.

The ovary becomes a berry or a fleshy grape that's very succulent and juicy. It differs in shape, size, color, and flavor depending on the type & variety. It's covered with a thin skin that's crisp or crunchy or firm & tough. Inside there are from one to five elongated grape seeds (most often one or two - the others having failed to develop), blunt at both ends,

& thicker at one end than at the other. They're quite hard, almost woody, and contain a small kernel covered with a pellicle.

So much for the general characteristics of grapevines. Many types & varieties are cultivated in vineyards, and several yield grapes that are good to eat. Information about & the cultivation of grapevines intended for winemaking are not the intent of this treatise. It will cover only the ones that are grown successfully in gardens in our climate & whose fruit is eaten fresh, preserved, or dried.

I. *GRAPEVINE with small, somewhat rounded blackish premature grapes.*

Early MORILLON. Premature GRAPE.

Madeleine GRAPE.

This grapevine doesn't grow as large as most of the others.

The shoots are light green and of average strength. The nodes aren't far apart from each other.

The leaves are small, light green both on the inside & outside. Their denticulation is broad & not very sharp. The large main lobe is about four-&-a-half inches long. The two small ones are three inches & the two middle ones are three-&-a-half inches.

The clusters are small and quite full of grapes that aren't pressed close together. The grapes are small, slightly elongated, about five-&-a-half *lignes* in diameter by a little bit more in height. Their skin is firm, purplish-black with a slight bloom. The flesh is greenish. The juice is a bit sweet and almost flavorless. There are two small light green seeds.

The entire value of this grape lies in its early ripening, and it ordinarily would appear on a table only because of its attractive appearance. There are several varieties of the Morillon, one with white fruit, the common one with black fruit,

one with white & powdery leaves, &c. Although their fruit is better because it's not so early, they remain in vineyards & are never grown in gardens.

II. *GRAPEVINE with medium-sized rounded white to yellowish grapes.*

CHASSELAS. Golden CHASSELAS. White BAR-SUR-AUBE. (*Pl. I.*)

This grapevine is larger than the preceding one. The leaves are medium-sized and are quite deeply indented. The large lobe is five-&-a-half inches long, the two middle ones are four-&-a-half inches, and the two lateral ones are three inches long. Their denticulation is wide & not very sharp. The stalk is three-&-a-half to five-&-a-half inches long.

The clusters are big. The grapes are round and of different sizes. The medium-sized ones are about eight *lignes* in diameter & a little less in height. Their skin is light green and firm. When completely ripe they tend a little to yellow & the side in the sun takes on an amber hue. The flesh is very juicy and a slightly greenish white. The juice is very sweet & sugary. The seeds (from two to four) are green mottled with gray.

This is the most common grapevine in our gardens because its fruit, which is delicious, ripens more completely than any other grape in our climate & keeps until May.

III. *GRAPEVINE with medium-sized rounded reddish grapes.*

Red CHASSELAS.

This grapevine is a variety of the preceding one. Generally its clusters are smaller than those of the golden Chasselas & its grapes, not quite as big, are lightly colored red on one side. The shaded side frequently stays light green.

IV. *GRAPEVINE with medium-sized rounded white musky grapes.*

Musk CHASSELAS.

This grapevine's leaves are smaller & darker green than those of the golden Chasselas. The indentations aren't as deep and their denticulation is sharper. The large lobe is four inches long & the two middle ones are three-&-a-half inches. The stalk is three-&-a-half to four inches long.

The grapes are round, about the same size as those of the golden Chasselas. Their skin is firm like that of the Chasselas & but not crisp like the Muscat's. It's greenish white & doesn't turn amber like the Chasselas. The flesh is white verging on green. The juice is plentiful, sweet, & musky. The seeds (usually two) are small, gray, and gourd-shaped.

This grape ripens at the end of September about fifteen days later than the golden Chasselas. Although it's of lesser quality than the white Muscat, it has the advantage that it ripens completely in our climate.

V. *GRAPEVINE with laciniate leaves and medium-sized rounded white grapes.*

CIOUTAT. CIOTAT. Austria GRAPE. (*Pl. II.*)

This grapevine is a bit smaller than the Chasselas. Its shoots are a light yellow wood-color, & the nodes aren't very far apart from one another.

The leaves are palmate, laciniate in five divisions. The stalk, about three or four inches long, divides at the end into five petioles; sometimes they separate from each other at their origin. Sometimes all, or only some of them, are joined

for a part of their length & separate thereafter. The petioles have partially exposed central veins that extend along the entire lengths of the five lobes of the leaf. The main lobe itself is indented uniformly & quite deeply into five uneven portions bordered with a few rather uneven teeth. The two neighboring lobes aren't as long & are divided by their midribs into two unequal parts (the largest one is toward the base of the leaf), with several smaller lobes or large teeth on their margins. The two lower lobes are even smaller & are divided by their midribs into two much more unequal portions. The lower side has a deep indentation with three or four teeth. The remainder of the two lower lobes is edged with small indentations or with large, long, & sharp teeth. The large main lobe is about three-&-a-half inches long. The two lower lobes are two-&-a-half & the two middle ones are three inches long.

The clusters aren't as big & aren't as full of grapes as the ones on the golden Chasselas. The grapes are a little less round. In color, flesh, flavor, &c. there is no difference at all between them, & they ripen at the same time. A very few of the grapes have two seeds.

VI. *Muscat GRAPEVINE with medium-sized somewhat rounded white musky grapes.*

White MUSCAT. (*Pl. III.*)

This grapevine is about the same size as the Chasselas. The leaves are not deeply indented, but they're a deeper green & their teeth are much sharper than those of the Chasselas. The large lobe is about five-&-a-half inches long, the two middle ones four inches three *lignes* & the two lower ones are three inches long. The stalk, of average thickness, is three-&-a-half to five inches long.

The grape cluster is long, narrow, almost cone-shaped and comes to a point. Usually the grapes are overly crowded together, slightly oblong, and more enlarged at the top than near the stalk. They're seven-&-a-half *lignes* in diameter & eight *lignes* high. Their skin is crisp, light green, slightly powdery, and amber-colored on the side in the sun. Their flesh is slightly bluish-white and less juicy than that of the Chasselas. The seeds (three or four) are small and white mottled with gray mixed with purple.

This grape, the most delicious of all, rarely ripens completely in our climate.

VII. *Muscat GRAPEVINE with medium-sized round musky red grapes.*

Red MUSCAT. (*Pl. IV.*)

The leaves of this grapevine are the same shape as those of the preceding one but a little smaller. The indentations are no deeper, and the denticulation is similar, long, narrow, and very sharp. The central lobe is four inches nine *lignes* long, the two middle ones four inches, & the two small ones three inches. The stalk, thick and round, is three-&-a-half to four-&-a-half inches long. The leaves & the stalk soon take on a deep red color bordering on purple.

The grape clusters are elongated like those of the white muscat, but with not as many grapes because the flowers are more likely to abort. The grapes are quite round, the same in height & diameter (seven to eight *lignes*). Their pedicels are quite thick. Their skin is firmer than that of the white Muscat. Grapes that have been in the sun are a beautiful bright red, almost purple. The others are a pale color & sort of mottled yellow & light red. Their flesh is firm and bluish-white. The juice is musky, flavorful, & pleasant. Most of the grapes have only one seed.

If this grape isn't as delicious as the white Muscat, it has the advantage of ripening better in our climate.

VIII. *Muscat GRAPEVINE with large oblong musky purple grapes.*

Purple MUSCAT.

The leaves of this grapevine differ very little from those of the white Muscat in size, shape, denticulation, &c.

The fruit is big, somewhat oblong, eight *lignes* in diameter by nine *lignes* high. Its skin is very firm, quite deep purple with bloom on it. Its flesh is slightly greenish. The juice is musky & very pleasant, but less so than that of the two preceding ones. There are two or three quite full seeds in each grape.

IX. *Muscat GRAPEVINE with medium-sized somewhat rounded musky blackish grapes.*

Black MUSCAT.

The leaves of this grapevine are even less indented than those of the other Muscats. Their indentations are so barely noticeable that the leaves seem almost entire. The large lobe is only four inches three *lignes* long & the two middle ones are three inches nine *lignes*. The stalk is about three-&-a-half inches long.

The fruit is smaller & less oblong than the purple Muscat. It's seven & three quarters *lignes* in diameter & eight *lignes* high. Its skin is black or very dark purple & powdery. Its flesh is very lightly tinged with red underneath the skin. The juice is musky. Each grape usually has four small seeds that are pointed and reddish on one side.

This grape is of much lesser quality than the white Muscat.

but it's commendable because it's nice & sweet & it ripens much better even though the grapes are crowded so close together. Furthermore this grapevine is very productive.

X. *Muscat GRAPEVINE with largest ovate musky green to golden yellow Alexandrina grapes.*

Alexandria MUSCAT. Musky PASSE-LONGUE. (*Pl. V.*)

The leaves of this grapevine, slightly smaller than those of other Muscats, are more deeply indented and have finer & somewhat sharper teeth.

The grape clusters are big & elongated like the others. The grapes are extremely large, oval, and uniform, somewhat more enlarged near the top than near the stalk. The big ones are an inch high by eight-&-a-half *lignes* in diameter. Their skin is firm, light green, & it becomes slightly amber-colored when the grapes are completely ripe. Their flesh is white & firm. The juice is more or less accented with musk depending on the degree of ripeness. The seeds (one or two) are extremely small.

This grape, which ripens well only when it's on espalier facing south in warm ground & in warm seasons, doesn't fall short of being very worthwhile even when it hasn't completely ripened, whether it's eaten frosted with sugar or used in preserves that are delicious & very flavorful. It keeps for a long time.

XI. *GRAPEVINE with very large oval deep purple grapes.*

Morocco GRAPE.

This is a very large grapevine. Its shoots are stout & vigorous. The leaves are borne on thick stalks about ten inches long. They're large, deeply indented & have large & sharp teeth.

The large lobe is five-&-a-half inches long, & the two middle ones are four and a quarter inches.

The grape cluster is very big. The grapes are oval, and ever so slightly larger at the top than at the stem. They're an inch high and ten *lignes* in diameter, often bigger than that. The skin is thick & firm, deep purple with much bloom. The flesh is bluish-white and juicy. The juice is not very flavorful if the fruit is very ripe, but it's tart if it's not. The grape contains one or two large seeds.

This grape, much more pleasant to look at than to taste & more suitable as a decoration for desserts than on its own, ripens with difficulty in our climate. Merlet calls it the *African Grape* & has identified a variety with white fruit. The one that he calls *Maroquin* or *Barbaron* is a big round purple grape that isn't any better.

XII. *GRAPEVINE with the longest grape, cucumber-shaped and white.*

White CORNICHON. (*Pl. VI.*)

The leaves of this grapevine are large and so little indented that they appear to be almost entire. The denticulation is large & sharp. The large lobe is six inches long; the two middle ones are four to five inches. The stalk is thick and five to six inches long.

The cluster does not contain very many grapes. The grapes are long, fourteen to nineteen *lignes* by six *lignes* at their largest diameter, which is a little nearer to the top than it is to the other end. They're curved like a gherkin & becomes smaller near the stalk & much more so at the top without coming to a sharp point. The skin is firm with a lot of bloom, a very light green or whitish color that turns slightly yellow when the fruit matures. Its flesh is juicy, white, and transparent. The juice is sweet & sugary when the fruit is fully ripe.

The seeds (two, more often only one) are four *lignes* long and terminate in a point. They're located under the enlarged part.

This grape with its singular shape & pleasant flavor would be more desirable if it ripened better. There's a purple variety that ripens even less well.

XIII. *GRAPEVINE with larger oval green to golden yellow grapes; it's called Burdigalensis.*

BOURDELAS. BORDELAIS. VERJUS.

Of the three varieties of this grapevine, those with white, red, and black fruit, only the first is generally found in our gardens. The leaves are extremely large & not very deeply indented. The large lobe is six-&-a-half inches long, the two small ones four-&-a-half inches, & the two middle ones are six inches. The stalk is thick and four to five inches long.

The clusters are very big & appear as though they consist of several smaller clusters. The grapes aren't at all too crowded. They're oval, slightly more enlarged at the top than at the other end, eleven *lignes* long & nine *lignes* in diameter. Most of the grapes are more oblong than oval. Their skin is very firm with not very much bloom; they're a light green that turns slightly yellow when the fruit is ripe. Their flesh is quite firm; it's white with a shade of green. The juice is plentiful. Each grape usually has four average-sized seeds.

If extracted before reaching full size, these grapes yield verjuice which is widely used for cooking. They're also used whole in several sauces. Delicious preserves are made from them before they ripen. When they're completely ripe they're nice to eat fresh.

XIV. *GRAPEVINE with round, white, very small seedless Corinthia grapes.*

White CORINTHE. (*Pl. VII.*)

The leaves of this grapevine, borne on large stalks four or four-&-a-half inches long, are large and substantial. They're a not very dark green on the inner side and white, covered with thick down, on the outside. They're not very indented and have margins with long & very sharp teeth. The main lobe is five inches long; the two small ones are three inches & the two middle ones four inches.

The grape cluster is extremely elongated and is full of grapes that are not pressed against one another. The grapes are round and very small. The biggest ones are only four-&-a-half *lignes* in diameter and the same in height. There is bloom on their skin. It's the same color as that of the white Chasselas, & sometimes it even turns slightly amber colored on the side in the sun. The flesh is very juicy, & the juice is sweet & extremely pleasant.

This small grape matures around mid-September. There are two varieties: one is red and is less highly regarded, and the other is purple but its flowers are very likely to abort. There's a seedless grape called the *Gros Corinthe* because it's much bigger than this one, but it's smaller than the Chasselas and appears to be a variety of it.

CULTIVATION.

Seed planting is the best way to propagate individual grapevine plants & to obtain their varieties. But because it's a long wait (sometimes twelve or fifteen years) to get the first fruits of grapevines raised from seeds, this route is too slow to be profitable. Grapevines usually are propagated by layering them & from cuttings.

Cuttings are taken from strong shoots with the most buds. They're cut fairly long, making certain that each cutting has at least four nodes. They're better when the shoots are cut at five or six nodes above their point of origin, & when they retain a little of the preceding year's wood at their larger end. They're then called *Crossettes* [*Translator's note*: heel cuttings]. They take root much more easily that way than do other kinds.

The cuttings are planted or driven into earth that's fresh or kept that way by watering, to a point just above their second node. They're sheltered from the sun either by a wall or better by straw mats. If there are only a small number of cuttings, their taking root & subsequent progress can be promoted by planting them in a pot or frame or in a basket set in a hotbed & sheltering them with a straw mat, or better yet putting them under a bell glass or a frame until their success is assured. February is the time to make the cuttings. Some trim their cuttings, tie them in a bundle, and soak the large ends in a basin or in a small pool (keeping the other end out of the sun) until they see that the nodes have put out roots or at least root buds. They're then planted as just described above. The end of the cutting should never be immediately above a node, but rather at least one inch above it because the shoots of grapevines are very pithy and the buds soon would be exposed to air & dry out.

Grapevines additionally can be propagated by cleft grafting. In February a vinestock is sawed off even with the ground. The stock is split, & a graft made from the large end of a shoot with the most wood & the most nodes, is inserted properly. A dressing is formed at the insertion point, the plant is earthed up & the exposed part of the graft is protected from direct sunlight.

Frequently the graft may put down roots instead of uniting with the stock; but at least the resulting benefit is the same.

Layers & rooted cuttings can be planted from November until the end of February in loose, warm, slightly gravelly soil, which is best suited to grapevines. It's not that they won't succeed in all kinds of soil, but in soil that is damp, cold, heavy, compact, &c. the fruit ripens with difficulty & it isn't as good.

In our climate the Chasselas, the Cioutat, the Corinthe, &c. ripen well in southern, eastern, & even western exposures, on espalier, counterespalier, in borders around the squares of kitchen gardens, and in rows in rectangular beds such as one finds in vineyards. Muscats & several other grapes require espaliers & southern exposures, yet in most cases they ripen there only incompletely. As a result, those who fancy these grapes and who wish to obtain delectable ones every year should place glass frames in front of the espaliers.

If a grapevine is left to itself, no espalier wall would be big enough for its shoots that often will stretch several toises in a single year. This excess wood greatly diminishes the quantity, quality, & size of the fruit. So grapevines have to be pruned more than any other fruit tree. Some sources say that it's better to prune them improperly than not to prune them at all. At what time, on which branches, and to what length should the pruning be done?

1°. Grapevines can be pruned from December until March. Most commonly pruning is done toward the end of February before the sap has begun to rise.

2°. In contrast to most other fruit trees, grapevines are pruned on the biggest & strongest shoots. The weak ones are completely removed, & the medium ones are pruned

only if necessary, for example when the strong ones are not well situated, if they're all on one side of the vinestock & the other side has only medium ones, &c. (the latter only applies to grapevines on espalier & on counterespalier.)

3°. The vigor of the vinestock & the space available to train the shoots will determine the length to be pruned, or more precisely, the number of shoots to be pruned short & those that have to be pruned long. The former are pruned down to two or three buds (they're called *Coursons* or *Tailles-à-bois* [*Translator's note*: spurs] because they're mainly intended to provide good branches for the coming year). Those pruned long are pruned to four or five buds & are called *Plaies, Tailles,* or *Tailles-à-fruit* [*Translator's note*: fruit-bearing shoots]; the latter name indicates their purpose. When the vinestock is weak, more spurs than fruit-bearing shoots are made and more fruit-bearing shoots than spurs when it's very vigorous. When it's of average vigor, the numbers are equal. Although this method of pruning is very well known, we'll outline the procedures after pointing out 1°. when pruning one must never cut immediately above a node but rather at one or two inches above it. 2°. the bottom of a slanted cut should be on the opposite side of the branch from the bud so that it won't drip over the bud and damage it.

I inspect the productivity of a newly planted vinestock in June. Of all the shoots it has put out, I leave behind only the two strongest & best situated & I remove all the rest. If the vinestock is intended to cover the top of an espalier, I leave only one of the shoots on it to make a branch, which often takes several years to form. I count on it having grown & reached a suitable height in a preceding February. The shoots that have just emerged at its top are treated as though they were on a vinestock intended to extend along the bottom of the espalier. The following February I prune

both of these shoots down to spurs with two buds on each one. By June these four buds should have produced four shoots, which I retain & will train as necessary. If there are other shoots emerging from the vinestock, I remove them. If by the following February the four shoots are sufficiently vigorous to offer hope for fruit, I prune the very lowest shoot on each spur from the preceding year down to a spur. The uppermost one I prune down to a fruit-bearing shoot with four buds, which will yield two spurs & two fruit-bearing shoots. However, if the shoots are weak, I keep on each spur only the strongest & best situated one. I always prefer the lowest shoot as long as it's not the weakest, & I prune it down to a spur. In June I do the necessary bud removal & then train them. The following February, if the spurs have lived up to their expectations, each one will have two good shoots, and I prune the lowest to a spur & the other one to a fruit-bearing shoot. The fruit-bearing shoots after the final pruning should have four shoots apiece that I treat based on their strength. 1°. If all of them are weak, I cut back the fruit-bearing shoot on the lowest one converting it to a spur, or I remove the fruit-bearing shoot entirely. 2°. If they're of moderate strength, I cut back the fruit-bearing shoots on the two lowest ones, or I select the two strongest ones, pruning the lowest one to a spur & the other one to a fruit-bearing shoot. 3°. Lastly, if they're very strong, I make a spur out of the lowest one & I prune the others to fruit-bearing shoots, assuming that I have sufficient room to train all of the shoots that will originate from this large number of fruit-bearing shoots. This is because it's better to unburden the grapevine by curtailing a lot of shoots (they're almost always too full of them) than it is to subject it to clutter & etiolation by leaving too many branches on it. That's just about all there is to pruning grapevines, where mistakes are of little consequence & are easily fixed. We'll add only the following comment:

When a grapevine stock is fastened to a vine prop one can't prune as many shoots as when it's on espalier or on counterespalier. The reason is clear. Normally there are only two spurs & two fruit-bearing shoots left on it. At the next pruning the two fruit-bearing shoots are removed, cutting back the branches that they emerged from above the spurs, in case the latter would each produce two good shoots. Otherwise the fruit-bearing shoots on the lowest shoots are cut back; as a result only four shoots are ever pruned. However, if the vinestock is exceptionally vigorous, two spurs & three fruit-bearing shoots can be left on it, or the two fruit-bearing shoots can be allowed more length, up to six or seven buds, unless several vine stakes are driven in. The vinestock thus is kept low, growing no more than two buds each year. If in the end it gets too tall, it's replaced by layering. Alternatively one can take advantage of an occasional vigorous shoot emerging from old wood or from the stock. It's first pruned to a spur & developed to rejuvenate the vinestock, which is cut off above it when it's productive & in renewable condition. The branches of vinestocks on espalier or on counterespalier that are too old, worn out, or damaged by disease or accident are restored the same way.

At the end of May or the beginning of June all new shoots of false wood are removed, unless some are to be saved to fill gaps or to replace branches that soon will have to be cut off.

A new inspection is done in July to disbud growths of false wood in case any more have developed. At the same time a good part of the small shoots that emerge from the axillas of leaves are cut off. If the shoots bearing grape clusters are weak

or only of average strength, it's best to trim them back above their highest cluster. These curtailments keep the grapevine from becoming cluttered & diverting its sap, which would be better used to amply nourish the fruit & the good shoots rather than to strengthen useless branches. Nevertheless enough shoots & leaves must be left to protect the grape clusters from the sun, because it's not yet the time to uncover them. The conserved branches should be trained several times during the summer as they lengthen.

In August & September it's very helpful (necessary if there are dry spells) to water the base of each vinestock from time to time. The fruit will benefit & will be better nourished for it.

Finally, when the grapes are nearly mature, the leaves that cover them must be cut away so that the sun will improve their juice & give them a beautiful color. Water poured over them before the sun's rays hit them will make their skin tender & will allow them to obtain the color that makes them so appealing.

Muscats often ripen with difficulty, & the grapes are small because there are too many of them & they're crowded too close together. According to La Quintinye, some of the flowers can be aborted by spraying them with water from a pump or a watering can if there's been no rainfall that produces the same result.

Manure & other fertilizers increase the vigor & fertility of grapevines, but usually with a loss in the quality of the fruit. It's much better every two or three years to remove some of the earth from the base of each vinestock & to replace it with good fresh soil.

It's well known that netting & bags of paper or horsehair cloth protect grapes from birds & flies.

USES.

Grapes are eaten fresh. Some are glazed with sugar when not completely ripe. Others are preserved in vinegar, made into brandy, or dried. The latter come to us from more southern climates. Those to be eaten fresh should be picked only when they're completely ripe. Those to be saved for late in the season (they will keep until May) should be harvested a little earlier during clear & dry weather. They're hung up uncovered, or preferably with each cluster inside a paper bag, in a good fruit loft or in some other place that's well closed up & protected from frost.

End of Volume Two.